Presidential Address
AT THE
EPIDEMIOLOGICAL SOCIETY.

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GENTLEMEN,—My first duty is to thank you for placing me in the honourable and responsible position I now occupy as President of this Society. I must suppose, whatever be my own misgivings on the subject, that you recognise in me some personal or official fitness for the post, and it therefore only remains for me to endeavour to justify the selection you have made, though I confess I anticipate some difficulty in doing so. The duties of a Society with such aims as those of the one over which you have called on me to preside are of a very important nature; the questions it proposes to investigate are often of surpassing interest, and the influence it ought to exercise for the public good should be largely exerted and widely felt. To guide the affairs of such an institution seems to me to demand, in the person who holds the office of president, a combination of qualifications that I can lay no claim to; nevertheless, as you have been pleased to place me here, it will be my duty and my anxious desire to devote to your service such knowledge as I may have acquired during a long residence in India, where epidemic disease prevails; and for the rest, I can only crave your indulgence for such shortcomings as must occur in the case of one whose experience has been rather that of a practical physician than of a scientific epidemiologist; assuring you, at the same time, that no effort shall be wanting to promote the welfare of the Society.

On assuming this seat, I know it is my duty to inaugurate the session by a brief address on some subject cognate to the work before the Society, and I must therefore observe the usual routine; but I admit I approach it with some hesitation, for there is so much that might be said that I hardly know what to select as most appropriate to the occasion. I trust, however, that I shall not greatly err in selecting a subject connected with the Progress of Epidemiology in that great country which contributes to the British Empire 250,000,000 inhabitants, composed of many races; and territory as large as all Europe, excluding Russia—including every climate from that of the arctic to the torrid zone; and that is regarded by many as the birthplace and permanent home of the most terrible epidemic disease to which the human race is liable.

We are now entering on our thirtieth session, and, I trust, with reason to believe that our progress is satisfactory, and our work such as to prove that the Society is fulfilling the main object for which it was founded. Though not one of the largest, it is certainly not one of the least active or important among the medical societies of the metropolis, whilst the cosmopolitan range of subjects embraced within the scope of its inquiry renders its proceedings of far more than mere local interest. The papers read and subjects discussed during previous years vindicate its title to a prominent place among institutions which have for their object the promotion of some of the best interests of mankind; and I can only express a hope that the session now commencing will not fall short, in this respect, of its predecessors.

As a comparatively new member of the Society, I have as yet had but little experience of its mode of working, and few opportunities of taking much part in its discussions, but I have learned enough of its objects and proceedings to know that they merit the best effort of the members for its support, and also for the elucidation of the important (and, in some cases, still undetermined) questions that come before it, and which so deeply concern the welfare of man and the prosperity of nations—problems relating to the genesis, diffusion, and prophylaxis of disease which, in the epidemic form, still so often proves the scourge of communities and the enigma of science. Such are the subjects it is our duty to investigate, and by degrees we hope in some measure to unravel. Nor need we doubt that in time much of what is now obscure will be made clear. When we think of what has been done but recently—how much has been learned by careful observation and generalisation, how beneficial has been the result of the knowledge as applied to sanitary work, and in the diminution it has effected in the death-rate, and when we contrast our present knowledge of idiopathic fevers and other diseases, the laws of contagion, and the natural history of entozoa, with that of but a few years ago, we may reasonably hope that the work of such a Society as this will be prolific of good results, aided, as I trust it always will be, by the experience of men who have studied disease, not only by the bedside of metropolitan hospitals, but in all climates, in every quarter of the globe, in the army, navy, colonies, and in our Indian empire (which may be regarded as the head-quarters, not only of epidemic, but also of some special form of indigenous or endemic disease). Regarding it from this point of view, we naturally desire to have a large accession of members on our rolls, and to see a greater share of the interest that is so freely bestowed on the pathology and therapeutics of special forms of disease accorded to epidemiology, to disease in the aggregate, or as it affects the masses of the population, when, in obedience to laws with which we are as yet but imperfectly acquainted, it moves in and from city to city, over rivers and across seas, from province to province, from continent to continent, until at length it disappears apparently as mysteriously as it arose, though, no doubt, in conformity with constant and definite laws. No one can have watched the rise, progress, and decline of an epidemic of cholera or of fever, such as the dengue that last swept over India in 1872, with their apparent caprices of invasion and subsidence, activity, and decline, without feeling how much he has still to learn before he can comprehend the import or reason of it all, and how essential it is that we should study, with all the aids that science can bring to bear on the inquiry, the complex and recondite agencies or forces that control the origin and movement of epidemic disease; patiently studying its various phases and phenomena, carefully substantiating facts, not allowing ourselves to be unduly influenced by the bias of preconceived theories, and endeavouring to record these facts *as they are*, and not as how we think *they might be*, for thus shall we gradually accumulate reliable data from which to generalise, and on which principles may be based and laws established. Nor is such caution superfluous, as I think will be admitted by some who have had to deal with sanitary reports.

The *raison d'être* of this Society is the investigation and development of our knowledge of disease in motion. It involves much, for any disease, where it spreads, whether among the people of a house, a ship, a village, a city, a province, or a continent, is an epidemic, and comes within the scope of our inquiry. Dysentery and malarious fevers are typically *endemic* diseases, but in India they may and do at times assume a dangerously epidemic character. But it is not meant that our inquiries should be restricted to mere epidemicity alone; we cannot advantageously study one phase of the natural history of disease and exclude others. There is so much in etiology, semeiology, and pathology both human and comparative, that concerns our department of research, that we may not ignore the means by which we gain the most important of all information to the epidemiologist—namely, the means of discriminating one form of disease from another. Therefore, though our proceedings will naturally refer mainly to epidemic disease, we shall thankfully receive and carefully consider all information that may tend in any way to throw light on the causal relations, and on the influences exercised by climate, season, locality, food, and occupation on the genesis and dissemination, of all diseases, not excluding those of the lower animals, or even of plant life. I might illustrate this by referring to the importance of discriminating between the different forms of fever that occur in India. It is well known that the greatest proportion of mortality in India is ascribed to fevers. The highest death-rate[1] was registered in Bombay, where it equalled 20·82 per 1000; in Madras, the deaths of 469,241 persons gave a death-rate of 10·08 per 1000. Both here and at Bombay, however, the mortality recorded was greatly aggravated by famine. The statistics of "fevers" in all years are admitted to be most inaccurate, but the deaths registered under this

[1] Vide Report of Sanitary Commission of the Government of India for 1877.

head in the different provinces during the year 1877 were as follows :—

Bengal	711,037
North-west Provinces	574,722
Punjab	219,281
Central Provinces	131,123
Berar	34,453
British Burmah	261,001
Madras	469,241
Bombay	336,865
Assam	18,725
	2,756,448

In 1878 there died in Bengal, of diseases classed as fevers, 742,887 persons (419,294 males, 323,593 females). The total death-rate from these diseases was 12·38 per 1000, against 7·58 per 1000 average on the previous five years. Part of this may be attributed to better registration.

In 1877, out of a population, in nine provinces of India, of 181,929,889, there died of fevers 2,521,438; whilst of cholera 635,977 died. In 1874 only 81,266 died.

In his report for 1878 the sanitary commissioner (Dr. Little) of the Hyderabad assigned district of 2,756,448 shows that there was exceptional mortality during that year. In a population of about 2,186,988, the death-rate was 81½ per 1000 in 1878, against 32·1 per 1000 in the previous year. The total deaths in the year were 178,404, and the causes were as follows, fever being the most prominent :—

Death causes.	Total deaths.	Deaths per 1000.
Cholera	34,306	15·6
Small-pox	5,850	2·7
Fevers	85,260	38·9
Bowel complaints	27,577	12·6
Injuries	1,147	·5
All other causes	24,264	11·1
All causes	178,404	

This great mortality is probably partly attributable to the indirect influence of the famine, which deprived the province of much of its most wholesome food, by causing exportation of grain to the famine districts. The population to a great extent thus subsisted on an inferior or deteriorated kind of grain. There were other local climatic causes, but to these I need not allude. I refer to the subject as an evidence of the great mortality of fevers, as compared with other diseases.

There is no doubt that under the heading Fever many deaths from other causes are recorded, and we may probably refer a large proportion of them to diseases of an inflammatory character affecting the thoracic or other viscera, or to complications involving inflammatory action elsewhere. In a vast country like India, where the population is so extensive, and the means of registration of necessity limited, often not under medical supervision at all, it is not to be expected that greater accuracy can be ensured; but, were it possible to discriminate among the various forms of disease returned as causing the mortality by fever, we should have a very different result from the present one. One can hardly refer to this subject without expressing admiration at the great progress that has been made of late years in registration under the direction of the sanitary authorities of India, and confidence that it will continue to improve, and render the statistics more valuable even than they are now. Of course, where the registration of death is not subject to medical definition, discrimination between the various forms of fever or other death-causes could hardly be expected; and therefore the example I have just given is hardly so good an illustration of what I refer to as typhoid, for which we have accurate medical statistics of our European troops in India. It is within my recollection that attention was first called to the existence of this form of fever in India, and yet there can be, I suppose, no doubt that it has always been there. It soon became generally recognised as a new discovery in India, and people wondered how it had escaped observation hitherto, whilst some perchance regarded it as a new disease. But it was just this power of discriminating observation that is so rare and so valuable that had been wanting; it was this that, exercised by Budd, Jenner, Murchison, and others after them, established a new era in the nosology of fevers in England; and it was this that, a little later, in India, discriminated between certain forms of remittent and enteric (i. e., between malarious and specific) fevers, and that will, I hope, ere long further discriminate and rearrange the nosology of fevers in India and the tropics.

Now, typhoid or enteric fever is an important cause of mortality among our young European soldiers in India; and it raises or suggests questions of great importance in regard to them—such, for example, as the right age, time, and seasons for sending them to India; to say nothing of the hygienic questions as to sanitary measures arising out of its causal relations. The Sanitary Commissioner's Report of 1877 says that out of 233 cases of typhoid, 92, or 39 per cent., proved fatal; the admission rate being 4·1 per 1000 of strength. It moreover appears that 2·45 per cent. occurred at or under twenty-four years of age, 1·55 at twenty-five to twenty-nine, 0·99 at thirty to thirty-four, and few or none above that age; showing that the disease tells most severely on the younger men—in this respect resembling typhoid in England. Again, Bryden, in his Report of the Statistical History of the European Army in India up to 1876 (published 1878), says: "It has no geography; and it is a matter of popular observation that no regiment or battery escapes enteric fever *in the first year*, whatever cantonment of India may be selected." "Out of seventy-three bodies of men, two regiments and seven batteries only returned no case of enteric fever in the first year." And he gives the following analysis of 368 deaths that occurred between 1823 and 1876 :—

Ages.	Total deaths.
24 and under	255
25 to 29	90
30 to 34	17
35 to 39	4
40 and upwards	2

Seventy-five of these deaths occurred within three years after landing in India, and 94 per cent. of the total were among men under thirty years of age. In a memorandum received only a few days ago Bryden says, out of 132 deaths from enteric fever in 1878, 90 occurred in men who had been under twenty-two months in India. All this shows that youth and the first year of service in India are the great predisposing causes.

Now, is this the same disease as that which might be contracted in London, Dublin, Windsor, or elsewhere in a town or barrack? from a watercloset, drain, sewer, well, or, it may be, from a milk-can? I have little doubt that very frequently it is exactly identical; but I believe also that perhaps as frequently, or more so, it is not; and this, I believe, not in regard to young European soldiers only, but of the whole population of India. In short, I am, and long have been, of opinion that a form of fever exactly like European typhoid, except in its etiology, exists in India and other hot and malarious countries; and that it is due to climatic causes, not to filth or specific causes such as give rise to it in England and elsewhere, and recent reports from India and other parts of the world seem to show that this view is gaining ground. I am indebted to Surgeon-Major A. Clarke for the following note :—

"Typhoid fever has prevailed very extensively in Natal and Zululand during the war. Since Jan. 1st, 1879, to May 31st, no less than 267 admissions for enteric fever have been recorded. Many of these occurred in healthy camps on ground previously unoccupied (virgin soil), and in bodies of picked men. The water-supply, as a rule, good; no sewers or drains; conservancy, dry earth or trench, and carefully attended to. The troops of Crealock's Division, which were encamped near the coast and in close proximity to marshy ground, where the natives suffer severely from remittent fevers, had more admissions from enteric than the Second Division, which was inland and generally at higher elevations. The medical officers differed as to this fever, several maintaining it was not typhoid as commonly understood in England, but bilious remittent with typhoid symptoms, as seen in India; others nailed their colours to the mast that it was genuine enteric. In support of the former, a medical officer just home reports that numerous cases entered as enteric were discharged and at their duty five or six days afterwards. Surgeon-General Woolfreyes describes this fever as 'typho-malarial.' He says: 'It is not a fatal fever, but it causes great prostration, and a change to England is absolutely necessary. I am of opinion that it is climatic, the true autumnal fever. It, as a rule, commences with sore-throat, a peculiarity; the rose spots are invariably present, and in fatal cases the lesions of Peyer's patches are well marked.' At the time that enteric was reported so common in the First Division, jaundice also

prevailed very extensively, but was unknown in the Second Division. Enteric has also been reported as causing much sickness amongst the troops in Afghanistan. Here, again, camps were often pitched on virgin soil, though the water-supply was far from satisfactory, and dead camels so constantly polluted the streams. It prevailed *with* cholera and severe remittent fevers. Altitude made no difference, cases being admitted in camps several thousand feet above sea-level. Enteric cases are reported from nearly every station in the Bengal Presidency, some such as Cambellpore, in the Punjab, where the 'filth' element is at a minimum. At this station there is no large bazaar or city in the vicinity; the soil is arid, sandy, and very dry; the rainfall exceedingly small; water-supply good, and very carefully filtered and attended to; the dry-earth conservancy is carried out to perfection; the milk danger is almost *nil;* yet enteric occurs, and amongst the troops who drink hardly any milk, while the women and children who probably drink a good deal of bazaar milk have so far escaped. These facts seem to show that enteric fever cannot be always ascribed to a 'filth' cause, but that climate or what is embraced in that unknown word 'malaria,' may give rise to it as it undoubtedly does to intermittents, remittents, and *possibly* cholera."

Be it clearly understood, however, that I do not for a moment dispute the existence of genuine *filth* typhoid in India. The official returns, which cannot be gainsaid, and my own experience, alike leave me in no doubt about it. But I do believe that many cases now recorded, and rightly recorded, as typhoid in India, are not caused by the same specific agency as that which gives rise to typhoid here, and also in India, where the necessary conditions are present. That there are, in fact, two, perhaps more, forms of typhoid, or perhaps, I should say, different causes for a disease presenting the same phenomena, one being specific, the other climatic; if so, it is obviously very desirable to discriminate between them—not merely as a matter of nosological or pathological interest, but in regard to the hygienic measures that are necessary in either case. This question is of great interest to epidemiologists, and is just one of those subjects that should come within the scope of our inquiry. A remarkable instance occurred near London lately, where an *epidemic* of typhoid was traced to its origin along the track of a particular water-supply by a distinguished member of our Society. Our lamented colleague, Murchison, also traced a similar outbreak to contamination of milk by polluted water. The explanations of these outbreaks were exactly in accordance with these views, no doubt, rightly held in Europe. Typhoid in India, however, would not always be similarly explained.

Questions of this nature are, I think, such as might be advantageously discussed here. I am aware that great differences of opinion exist among those whose views command the highest respect. Now, to compare ideas, to discuss, and, it may be, to reconcile differences, to clear up doubts for ourselves and others, to confirm or refute, seems to me to be our legitimate work. Our views on a particular subject may be unsettled; they may be influenced by preconceived theory, and altogether far from confirmed. One can understand that a cautious and reflecting mind may desire more evidence before accepting either view presented as the correct one, or before admitting that it has been convinced. In regard to some questions of etiology, such, I believe, is far from an uncommon frame of mind. The consideration of such vexed questions is most desirable. Let us hope that free expression of opinion, and temperate discussion of views, however opposite, will here be attended by good results.

The late Mr. Bedford, whose comparatively early death was deplored by the Bengal Medical Service, of which he was a brilliant ornament, said in a letter to the President of the Society in the year 1850: "Epidemic diffusion is the most important medical question of the day, and can only be studied through systematic and parallel observations conducted by a number of intelligent men working under one head. India, from its climatic peculiarities and the nature of the service, offers, I hesitate not to affirm, the most magnificent field in the world for carrying out such a series of connected observations as may tend to elucidate the laws of the most terrible disease which flesh is heir to, and it will redound to her eternal honour to be in advance of such inquiries." Whether these aspirations have in any way been fulfilled will appear from what I have to say; it will, I think, be seen that India has contributed in no small degree towards the attainment of the end so much desired; and that we owe much to the labours of those distinguished men whose writings, published in monographs, in reports, and official returns, afford ample proof how earnestly they have laboured to advance our knowledge of disease. The names of Jameson, Scott, Annesley, Twining, Martin, Mackinnon, Morehead in earlier times; of Goodeve, Chevers, Mouat, Bedford, Ewart, Bryden, Murray (our late distinguished president), the Cunninghams, Payne, Lewis, Macpherson, Cornish, Macnamara, Hewlatt, Townsend, Coates, Planck, and many others subsequently, to say nothing of the numerous valuable medico-topographical reports by the medical service generally, represent a literature of epidemiology that is unsurpassed in richness of its material, and affords evidence that the subject has received and is receiving elucidation that bids fair in time to throw such a flood of light on the natural history of epidemics as will reduce our knowledge to a state of exactitude hitherto unknown. They have, it is true, taught us but little of the nature of the causes of epidemics such as cholera, or of malarious diseases, but they show what may be expected in regard to them, when and how they will appear, and how sanitary work may be made most effectually to avert, prevent, control, mitigate, or remove them; nor is it too much to say that we hope, if not to banish or stamp out, at all events still further to mitigate their ravages. This, I think, is warranted by experience, for certainly the past twenty years have witnessed great progress, and we already see that not only is the value of life increasing, but that the virulence of, and mortality caused by, epidemic disease are being controlled, whilst the vexatious and purposeless restrictions and restraints of quarantine are diminished if not altogether removed, in our dominions at least. Science that has enabled us to reduce the death-rate among our troops from 17·9 to 8·56 per 1000 in Europe, and from 69· to 17·62 per 1000 in India, speaks for itself, and were there no other result, this alone is a triumph such as has been achieved by no other department of knowledge. Pray do not suppose that I claim all this for Indian workers. We all know that these great steps in social and sanitary progress began here, but I do say that the torch then lighted has since been worthily and firmly borne in Indian hands.

This Society, young as it is, can remember the commencement of systematic sanitary work in the East, and may claim some share in the origination of the good work; for among its earlier members were some who advocated the study of epidemiology and hygiene in India. I cannot now stay to dwell on this, but I may say briefly in regard to its progress and work that until the sanitary department was formed, less than twenty years ago, comparative, I might almost say complete, ignorance on the subject of epidemics, and of the diseases that prevailed among the people, existed. An epidemic might carry off thousands, but we knew not where it commenced, where it ended, or what area it occupied. Now, thanks to the continued and careful statistics, we know all that and more with fair accuracy, and are gradually collecting facts which make the study of epidemiology possible. Before organised sanitary work in India began our knowledge of the general population—nay, even of the European troops and prisoners—was most imperfect. Now, thanks to that department, and especially to Bryden, whose name cannot be too prominently mentioned in connexion with the subject, we have in his most elaborate and valuable statistical reports facts and figures, as well as deductions, which deserve the closest attention. We have, in short, the most complete details of sickness and mortality in all classes over the whole of India. It is impossible, however much anyone may differ from his conclusions, not to recognise the great value of his work, for these reports contain a vast and continued array of authenticated facts, which will serve as a mine of information to epidemiologists; and there is every reason for believing that it is but an earnest of more, for if, as Bedford said, the circumstances of India were such as to favour the acquisition of knowledge in 1850, when the precise conditions of life of the population generally, and even of our troops and prisoners, were imperfectly known, what must it be now, when a system of observation, carried out by a body of trained observers under a head, such as he contemplated, is in full and daily improving operation? One can only wish that, considering the magnitude of the work, it were more extensive still, and that observations, already of the greatest value, could be rendered still more so by being concentrated on certain limited areas, so as to enable the inquiry to extend to details with a precision that at present can hardly be practicable. The results of epidemio

logical knowledge and sanitary work are seen in the effect already produced in reducing the mortality from cholera and other epidemics, and from malarial fevers. For instance, among our European troops, the circumstances of which are well known, there has been the following alteration in the general death-rate:—

1861 to 1865	9·02 per 1000.
1865 to 1870	6·98 ,,
1870 to 1875	3·23 ,,
1875 to 1876	2·3 ,,
1876 to 1877	·84 ,,

And it can be shown from the same source (Bryden) that there is a similar reduction in the death-rate among native troops; and that during the great cholera epidemic that prevailed in 1876, the death-rate among the civil population being 12·12 per 1000 (it was the famine year), that of the European troops was 1·75, and of the native army 2·2 per 1000. Also that in the death-rate of that great scourge of India—fever—there has been an equally happy result, as shown by the death-rate of a period of nine years—from 1868 to 1877—in the Bengal and N.W. Provinces gaols, as against a mean, in nine years ending 1867, of 22·41.[1]

	Per 1000.		Per 1000.
1859	13·76	1868	2·84
1860	49·19	1869	4·57
1861	38·14	1870	6·20
1862	30·81	1871	5·81
1863	25·44	1872	1·92
1864	29·96	1873	1·56
1865	7·65	1874	2·67
1866	5·23	1875	3·50
1867	3·12	1876	1·26
Mean ...	22·41	Mean ...	3·29

In India, as elsewhere, the purpose of epidemiological study is to observe accurately and to interpret the import of the facts—i. e., if possible, to elucidate the laws of which they are the expression,—and thus to form a scientific basis on which to direct sanitary work, which itself is the practical outcome of such observation, and concerns itself but little with theories. Those who have to do with it know how difficult it sometimes is to obtain *reliable* observations, such is the difficulty of excluding the bias of preconceived theory of the nature of the subject under investigation. Our Society, however, must hold the balance, and deal with theories as well as facts. No doubt the explanations sometimes are conflicting. Happily, in the practical mode of dealing with the question, there is not such conflict, and it is remarkable how little different is the action of those who hold opposite opinions on the causation of disease. As to the different views that are held in regard to fundamental questions regarding the genesis and diffusion of disease, let us hope that we may, perhaps, here contribute something towards their adjustment.

In illustration of the state and progress of epidemiology in India I might select the history of any of the great epidemics that have occurred of late years, but it would be impossible, in the short space of time at my disposal, to do this completely. I shall, therefore, confine myself to a few remarks on Cholera, as it, though far from being the most destructive, is the epidemic to which most interest attaches. No disease has been more carefully studied, and the means of doing so exist nowhere so abundantly as in India, for whether in the sporadic, endemic, or epidemic form, it is seldom absent from some part or other of the empire. In the so-called endemic area in Bengal the opportunity of studying it is never altogether absent, whether it be sporadically or moving as an epidemic within the limits of the endemic area (its permanent home), or in the periodic outbursts, when it passes over the continent generally in what seems a capricious manner, but according to what really, as shown by Bryden, is the operation of laws that are now beginning to be well understood. The mode of invasion and diffusion, the rise and decline, the influence of locality, season, meteorology, conditions of soil, air, water, food, are all now closely studied, and to them various degrees of importance as factors have been assigned by different observers; and from the statistics, conclusions have been drawn by Bryden and others that point with considerable force to the nature and the constancy of certain laws governing the progress of the disease; and albeit they have not as yet resulted in any very striking discovery, they seem to show that climatic and local phenomena form an important basis of a useful knowledge of the etiology of cholera, whilst the researches of Lewis and Cunningham point to certain conditions of soil as determining its production and development, as being most in accordance with the phenomena of its seasonal prevalence in the endemic area. But their prolonged and careful researches have as yet thrown no new light on the nature of the cause itself. Though it is only recently that this numerical method of dealing with epidemics has obtained in India, it is to be remembered that much valuable information has been recorded in times past in the writings of those to whom I have already referred and others, and in the records of the Medical Boards of the three presidencies, and reports of the sanitary commissioners. Indeed, since the advent of the Portuguese in the sixteenth century it has been described so graphically that one can hardly doubt the identity of the disease mentioned in early writings with that of the present day; in fact, it has as well defined a history as any other event of the past, and seems to have manifested the same phenomena, and to have been subjected to the same laws then as at present.

The theory that cholera is purely of Indian origin, and that, wherever it may appear, it is to be traced back ultimately to the delta of the Ganges, is disputed by some who see in history evidence that it has long existed in other parts of the world, and that it was described by the earliest writers—Sanscrit, Greek, and Arabian. I may here just remark that the name "haida," or "haiza," used by Rhazes nearly 1000 years ago in describing the symptoms of cholera is the same as that applied to it now by every Hindustanee-speaking native of India. As to its presence in India from earlier periods, we have descriptions by Correa, d'Orta, Bontius, and others, beginning from 1563. An epidemic of it in and about Goa in 1543, for example, is described by d'Orta, giving all the characteristics that distinguish an epidemic now. He calls it "monyxy" and also "haiza." It is described by a continuous chain of writers, as occurring in various parts of India, in the interior as well as on the coast, up to the seventeenth century, when, after being quiescent during the latter part of the eighteenth and early part of the nineteenth century, it broke out with great virulence in Bengal, and has remained there ever since, in what Bryden calls its endemic area, whence it spreads according to certain laws, which are being worked out with admirable patience and intelligence by this distinguished statistician. I cannot now trace the history of cholera in either East or West, nor refer even to the numerous authors who have described it. For full particulars on this subject I refer you to Inspector-General Dr. J. Macpherson's learned work "The Annals of Cholera."

I need hardly insist that cholera is not a new disease, or that it did not, as by some supposed, make its first appearance as an epidemic in Jepore, in Bengal, in 1813; though no doubt since that period it has been more closely investigated and described. All seems to show that it is the same now as formerly, and that though we have gained much knowledge of its natural history of late years, yet we are as ignorant as our predecessors of its real nature. We have, thanks to sanitary measures, disarmed it of some of its terrors,[2] and have diminished the mortality it caused; but as to treatment we have gained but little, though the empiricism of to-day is more scientific than it was in former days. We do not now burn our patients on the soles of the feet, tie ligatures round their limbs, or have recourse to other senseless barbarities; for we find that simpler and more rational methods are of greater avail, more or less according to the period of the epidemic at, and the promptitude with, which the remedies are applied. But we have learned that local causes have a potent influence, and that cleanliness, good air, *pure water*, and free ventilation are all powerful opponents of cholera; that we can predict its appearance and avoid it in certain places; and that it is not to be controlled by quarantine or sanitary cordons. And,

[1] Bryden's Report (1876), p. 157.

[2] And yet how little we can do. During this year, 1879, there were among the European troops in Bengal the following admissions for, and deaths from, cholera:—

	Admissions.	Deaths.
Officers	18	13
Men	803	605
Women	11	8
Children	14	12
Total	846	638

from the earnestness and intelligence with which the subject of its etiology is pursued, it is not improbable that sooner or later it too will be made out. We shall then be in a position to say not only what it does or will do, but what it *is*. Meanwhile we must go on observing and investigating. It is satisfactory to know that we are daily learning, practically, better how to deal with it, and how to modify its cyclical intensity and avoid its ravages. For my own part, until I know something more of the *nature* of the cause—be it a material poison, aerial or telluric, a miasm, or a dynamic agency that so perturbs the vital energy, I cannot see my way to formulate a definite theory either of the nature of its origin or the method of its diffusion. I find the highest authorities at complete variance on the subject, and reposing faith in theories diametrically opposed to each other. Some explain all the phenomena by contagion—i. e., communicability in some way of a *materies* or germ from one person to another. Cholera, they say, is the result of infection by a poison derived from the intestines, and water or air, but especially water, is the channel through, by, or in which the infective material is generated and conveyed. These arguments are supported by an abundant array of facts, and have been maintained by men whose very names carry conviction. Others reject altogether this explanation; they insist that local influences are all-important, and deny that the spread of cholera is due to human intercourse, that there is any poison transmitted by the excreta, or that the disease is in any way communicable from one person to another. They admit the existence of a poison of some sort—a miasm or an influence, though of its nature they are ignorant. It is a subtle thing that travels in certain directions in obedience to certain laws, is influenced by atmospheric and telluric conditions, and where it goes and finds certain local conditions, and the people prepared by them to submit to it, there cholera will prevail. They deny the efficacy of any enteric or specific poison in the water to produce it, though they attach the greatest importance to the purity of water from *all* organic contamination, impure water being one of the local conditions which, if added to crowding, filth, or other insanitary conditions and want of proper ventilation, is that *of all others* which favours cholera. Such are the principal theories of the disease as they are supported by fact and argument which appear convincing. Europeans, Americans, and some authorities in India maintain the contagious view, whilst high authorities in India adhere to the opposite theory, and declare roundly that the facts of cholera, in India at least, are altogether opposed to the contagion theory.

Dr. Coates, in his last report on Bengal for 1878, says: "Much has been written and much discussion has taken place during the year regarding the connexion between cholera and foul water. We have not yet discovered the poison of cholera, nor even if there be one. To limit the cause of cholera to one factor, and its entrance into the system to one mode only, would be very unwise. Short of demonstration, the objections against such inferences must be great. Notwithstanding this, I confess that every year's observation, in going from district to district, in hearing the various opinions of the local officers on the subject, and in reflecting on both, my conviction has become stronger and stronger that there is a connexion between impure water and cholera, and the one—in Bengal at least—is the chief (I would not make it absolute or conclusive) exciting cause of the other. Wherever the drinking-water has been most perfectly kept free from impurities, and especially local ones, there cholera has prevailed the least."

I have no intention now of entering into the controversy, and have merely referred to the main points of difference that exist among those who, having watched the disease closely and critically, are equally entitled to be heard. So far as I can see, no theory yet propounded meets all the difficulties, or explains all the phenomena manifested by cholera, at least in India. There is much in each that commends it to acceptance, though each is beset by difficulties. So far as I can judge, the direct contagion theory has now few supporters anywhere, for few believe that mere contact with the sick is attended with danger, and many believe the same with regard to the excreta, the enteric contamination of water—the water theory, in fact. This is not the time or occasion on which to offer an opinion on the matter; but I must say that, as far as my experience goes (and it has been pretty extensive), it inclines me to look for the explanation in wider and more general causes than those of infected water only. I feel unable to declare myself an unqualified adherent of any theory yet propounded; the time, I venture to think, for dogmatising has not yet come. We may, I believe, neither accept nor reject altogether the contagion theory. I doubt if anyone can feel so confident as to say that cholera is altogether independent of contagion in some sort of human intercourse for its diffusion; or that it is not so imported or conveyed to other localities. It is possible that may play a part, though a subordinate one, in the transmission of the disease; and yet I apprehend one must look for other and more general causes to account for all the phenomena. It must be borne in mind also that there may be influences and forces at work of which we know nothing, and that cholera may have different modes of working in India than in Europe. It is so with other epidemics. Yellow fever is subject to certain laws within certain parallels of latitude, or rather isothermal lines, but beyond these it is extinguished. Scarlatina can barely exist in India; it dies almost as soon as born. Cholera thrives for a time in other climates and countries, but perhaps under other conditions than those of India and does not endure. That may be signally true of it in India which is only partially so in other climates, and the laws which regulate its diffusion may not be—probably *are not*—alike in all countries where it has occurred. We are hardly in a position yet to act on any theory that has reference only to its origin. Strangely enough, the two most opposed in nature as working hypotheses, seem to have very little influence on the mode in which they are practically applied to sanitary work.

I would quote some words of a former president, Dr. B. G. Babington, which are not inappropriate:—"In the infancy of geology, first studied in this country, many phenomena observed in the arrangement of the earth's crust, as it is found in this island, were supposed to furnish fixed laws, and thus gave rise among our philosophers to divers ingenious generalisations. But when these same philosophers had, from the establishment of universal peace, the opportunity of taking a wider range and of studying the earth's structure, not in this country alone, but over the whole surface of the globe, they discovered in many instances that what they had supposed to be general laws were after all only exceptional cases. We require, therefore, in a study of epidemic diseases, as of geology, a wide field, in order that we may found theories on a sufficiently broad basis to avoid the risk of coming to partial and erroneous conclusions."[4]

On the question of importation of cholera in the Punjab epidemic (1875–76) and its spread by human agency, Dr. Bryden, in his Report, p. 308 (1876, published 1878), says:—"The assertion amounts to this. The Punjab is divided into thirty-two districts. Cholera was introduced into seventeen of these in 1875, and therefore it spread. Cholera was *not* introduced into fifteen districts, and therefore did not appear, or, if it was introduced, influences of which we know nothing stopped its propagation in these districts. unknown causes prevailing in the one half of the area are presumed to influence the human system so that it is capable of receiving cholera, and in the other to act universally as an antidote even to a cholera poison when introduced. This is what is offered as antagonistic to the theory which asserts that cholera is air-borne and is as far-flying as are the limits of natural areas. Primarily, these theories cannot be reconciled; the one or the other is false. If cholera is spread only by the human being, the theory which shows it to be air-conveyed is untrue; if cholera is spread solely as an aerial miasm, then the theory which recognises only the effects of human intercourse is unfounded. The most that is admitted by the advocates of the human theory is, that the subjection of cholera to meteorological agencies is absolute, and that these influences can and do operate so as to do away altogether with the effects of the poison, although imported. They do not recognise the entity *minus* the human being. The antagonistic theory, while holding, as opposed to demonstrable fact, the statement that cholera moves only by human agency, may, if necessary, be extended in its scope so as to embrace the other; that is to say, the inquiry is left open as to whether or not the cholera entity, after being aerially distributed, may be subsequently propagated or spread by man. In the theory which connects cholera solely with man there is no such extensibility. Human intercourse must explain every fact of spread and propagation, and nothing is left to the play of natural

[4] Address to Epidemiological Society, by Dr. B. G. Babington December, 1850.

agencies. Human intercourse, giving the widest scope to the signification of the term, cannot pretend to account for any fundamental phenomenon displayed during the progress of epidemic cholera; and, therefore, I assert the theory to be radically untrue as applied to the behaviour of cholera in India. I do not say that the above statement will hold true all over the world; and, even as applied to India, the theory does not preclude the possibility that cholera may be conveyed by the human being. Naturally the recoil is to the opposite extreme. The bold statement that cholera is never spread over an area unless human agency intervene, is apt to be met by the equally dogmatic statement that cholera is as pure a miasm as malaria, and as little amenable to the control of man."

I would, in passing, just remark on some curious and interesting facts regarding the introduction of epidemic disease into certain localities where the exact conditions of the people and the visitors were known. The nature of the miasm or influence is altogether unknown, but it can hardly be doubted that something was imported. Doubtless, as science progresses, epidemiology will give a simple and rational explanation of such things, and it seems to me probable that the diffusion of epidemic diseases may have to be explained on some law of which the following instances are only varieties of expression.

St. Kilda is one of the outer Hebrides, a small island N.W. of Scotland. In a work on this island by Mr. George Seton, M.A. Oxon., mention is made of a peculiar form of epidemic influenza known as the "boat cough" or "stranger's cough," having all the symptoms of influenza. By this the natives are almost always attacked shortly after the arrival of a vessel from the outer Hebrides. They allege that the disease is most severe when the visitors come from Harris, and that they suffer less when the vessel hails from Glasgow or the distant ports. The malady first attacks those persons who have come most closely into contact with the strangers, and then extends itself over the whole community. By some it is attributed to the inhabitants exposing themselves to cold by rushing into the water to assist the strangers in landing, but this is not a probable explanation. Others allege that it is due to easterly winds, but the ships generally arrive with a westerly wind. By some it has been remarked that the cough is a yearly epidemic, but Mr. Morgan assures us that three outbreaks have occurred in eight weeks, each following the arrival of a boat or vessel. It has been suggested that the sudden contact of a people, under exceptional circumstances as regards food and occupation, with strangers, is the cause which seems to exercise an infectious influence on them, though what the nature of it is no one knows.

Again, on the river Amazon, speaking of the gradual exhaustion of certain tribes friendly to the whites who inhabit the country near Ega, Mr. Bates says: "The principal cause of their decay in numbers seems to be a disease which always appears amongst them when a village is visited by people from the civilised settlements,—a slow fever accompanied by the symptoms of a common cold, *de fluxo*, as the Brazilians term it, ending in consumption. The disorder has been known to break out when the visitors were entirely free from it, the simple contact of civilised men in some mysterious way being sufficient to create it."

A still more recent, as well as a more strictly parallel, illustration of the occurrence of the malady in question in another part of the globe is contained in the account of the cruise of H.M.S. *Galatea* in 1867-68, where the following statement occurs:—"Tristan d'Acunha is a remarkably healthy island; but it is a singular fact that any vessel touching there from St. Helena invariably brings with it a disease resembling influenza. St. Kilda, off the west coast of Scotland, is known to be also similarly affected whenever a party lands amongst the people from any vessel. Whatever may be the real cause of the mysterious ailment—whether it is produced by contagion, like certain other epidemic diseases, or by a feverish excitement arising from a contact of a higher with a lower civilisation,—the actual occurrence of the distemper seems to be fully established; and the experiences of Ega and Tristan d'Acunha afford interesting illustrations of somewhat similar results in many different parts of the world."

Does not this seem to point to some subtle influence, the nature of which is unknown as yet? May not this in some measure account for the rapid decrease of the population of the South Sea Islands after contact with Europeans; and is it not pregnant with suggestive ideas as to the nature and the cause of transmission and diffusion of other epidemic diseases?

To return to cholera. In the present state of our knowledge we can only be guided by the inferences from well-ascertained facts and such laws as we have ascertained to be in constant operation, watching and carefully observing until we may, were it only by a process of exclusion, arrive at some deeper knowledge still. "So far," says the chief sanitary authority in India, "the history of cholera is full of enigmas and seeming contradictions, and though we have of late years collected many valuable data, and understood the importance of studying them on a broad basis, we know no more of the exact cause of the disease than our grandfathers did. We know that, whatever the cause may be, it flourishes in the midst of insanitary conditions of dirt and overcrowding, and especially of impure water, impure from whatever cause; we know that it is liable to occur under certain conditions, and at certain times and seasons, and we should endeavour to extend that knowledge, and hope, as we do so, to arrive at the precise nature of the disease itself." But it may be well to remember that "expenditure of public money must take place only on observed facts and experience," not in accordance with theories. "It would be prejudicial to real sanitary work if opinions which have been promulgated in some parts of India, as to the cause of cholera being due *solely* to the state of the water-supply, were to take root."

It is most important that we should arrive at some definite conclusion as to the real nature of the disease, for it is impossible but that our conceptions on this subject must influence the sanitary measures that deal with it, and I believe the question must find its final solution in India, where the disease is always present in its endemic and seldom absent from the epidemic areas. The highest authorities—for both I have the greatest respect—differ *toto cœlo* on this subject. Is it that they are both right, though seemingly so opposed in their views? Like the knights who fought about the silver and golden sides of the shield, will they not change places and find why they differed?

I would venture to suggest that in India the inquiry might be pushed with more detail in regard to individual cases and outbreaks in certain limited areas; and that, on the other hand, one or more epidemiologists of European fame should be deputed to visit India and study cholera with the eminent men who have devoted so many years of close attention to it there. It might be, I believe it would be, that mutually they would gain from each other, and that those who went out would find their own views confirmed as to the disease in Europe—modified as to what they deemed it to be in India. Of one thing I am convinced, that simple truth is the object of their search; and I feel sure that from such combined action the greatest benefit would result.

I must now bring these remarks to a conclusion. I have made them purposely of a very general character, as I wished rather to indicate some of the subjects that we may profitably discuss than deal with them in a controversial manner. I should like to have spoken of other epidemics—fevers, small-pox, the exanthemata and other miasmatic or zymotic diseases; of diarrhœa, dysentery, influenza, diphtheria, which all interest us as epidemiologists, and of those peculiar indigenous and endemic diseases such as leprosy, elephantiasis, beri-beri, and a host of cachectic conditions generally attributed to malaria, but perhaps susceptible of other explanations; of the interesting discoveries of Lewis, Bancroft, Manson, and others which have revealed to us the existence of parasites infecting the blood and tissues of men and animals to an extent hitherto undreamt of, probably having important causal relations with some of the endemic diseases hitherto referred to other causes, and on which I have already had the honour of addressing you. But time does not permit me to do so, for I have already detained you too long, and I can merely refer to them as subjects that I hope may from time to time occupy the attention of the Society. It only remains for me to thank you for the patient attention with which you have listened to me for so long.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Salisbury Infirmary has received £300 under the will of Miss A. A. Clarke, and £100 under that of the Rev. J. A. Scott. The Norfolk and Norwich Eye Infirmary has received £180 under the will of Miss Mason, of Necton. Mrs. Caroline Saxton has given £100 to the Salop Infirmary, in memory of her late father, Mr. Thomas Girdler Gwyn.

CLINICAL CASES, ILLUSTRATING SOME OF THE COMPLICATIONS CONNECTED WITH THE PASSAGE OF GALL-STONES.

BY S. O. HABERSHON, M.D.,
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COMMON diseases require more than usual care, lest their familiarity lead us to overlook their occasional dangers, and prevent us from guarding against unusual complications. The passage of gall-stone is not a disease of rare occurrence, or one that is only observed by those engaged in large practice, but one that is seen by all engaged in ordinary professional life. The condition is easily recognised, and the diagnosis is not difficult. It is a disease distinct in character, and its symptoms are decided; and, although in most cases accompanied with intense pain, and exciting great alarm and anxiety, the patients recover. I do not purpose entering into a full account of gall-stones, for nearly every text-book contains an account of their symptoms, and Dr. Thudichum, in his elaborate treatise, enters fully into their etiology and general symptoms. My object is to dwell upon some of the complications that arise, and the dangers that we find as the result of these occasional accidents.

As long as the *bile* retains its normal character, it remains fluid, although somewhat viscous. The cholesterine is suspended by the other constituent parts, probably by the taurocholic and chychocholic acids, in combination with soda; but when less alkaline, the cholesterine is deposited, and a calculus is easily formed. Sometimes the biliary calculi consist almost wholly of cholesterine mixed with variable proportions of the colouring matter of bile; at other times a larger portion is composed of inspissated bile. More rarely the component parts are earthy, as carbonate and phosphate of lime. The nuclei are also of different characters, as epithelium, clot of blood; but here I must again refer to the work of Dr. Thudichum. The calculi may be as small as grains of sand, and very numerous, or they may attain to the size of several inches in circumference, and be single. If there be several the circular character is lost, and they are moulded together by smooth facets; in this way a hundred or more calculi may be packed together, so as to form a compact oval mass. As long as the gall-stone remains in the bladder, no symptoms and no irritation may be produced, but as soon as it becomes dislodged marked symptoms ensue.

As to these *symptoms*, a rigor may come on with scarcely any pain, but in almost every case sudden pain is present, and of an intense and spasmodic character. The pain extends from the region of the gall-bladder to the scrobiculus cordis, then over the abdomen and through to the spine and the chest. Vomiting next ensues; the bowels are generally constipated, and if the bile-duct become obstructed, the excreta are deficient in bile and white in colour; the urine is scanty, and soon becomes very deep in colour and loaded with the colouring matter of bile; the skin becomes cold, and is often bathed in perspiration; the pulse is compressible, the heart feeble, and if the intense pain continue, collapse may supervene. If the biliary calculus reaches the common bile-duct, as it passes onwards from the gall-bladder to the duodenum, there is obstruction to the passage of bile from the liver, and jaundice comes on; if, however, the cystic duct only be obstructed, no jaundice is produced, as the passage of the bile remains free. After a few hours, or it may be days, the gall-stone, if it pass along the duct, suddenly emerges into the duodenum, and the pain as suddenly ceases; the jaundice gradually subsides, the motions assume their proper colour, the urine becomes pale and clear, the conjunctiva and the skin lose their yellowness. Other symptoms might be referred to; thus sometimes the sight is disturbed and the objects are seen of a yellowish colour, and if the jaundice persist, there is itching of the skin and night restlessness.

All these symptoms vary in intensity. First, the *pain* may be so intense that the patient sinks from profound collapse; the gall-stone may fall back into the gall-bladder, and the symptoms at once cease; or the calculus may be angular, the pain may be less intense, and the obstruction only of a partial character. This state leads to inflammation of the duct, and to recurrent attacks. In nearly every instance the duct is greatly irritated; but sometimes inflammation of the canal ensues within the ducts, and pus may collect in them, or the inflammation may be external; in the latter case local thickening may be produced, or fibrinous adhesion may form, or, if the disease be still more acute, pus may form so as to lead to local abscess. Again, there may be ulceration of the gall-bladder and of the duct, so as sometimes to cause pyæmia, according to Dr. Budd, or the softening and ulceration may produce perforation. If perforation takes place without adhesion peritonitis ensues, and is generally quickly fatal; but if, happily, adhesions have formed then the mischief is circumscribed. If the adhesions have taken place with the duodenum, ulceration may extend into the bowel, and the calculus be discharged by it, or become the cause of obstruction of the intestinal canal; or local ulceration may cause hæmorrhage from the branches of the vena portæ; or, lastly, the calculi, after having passed from the gall-bladder by an ulcerative opening, may set up local inflammation and abscess, and, having reached the skin, may be discharged *externally*. The brain may become oppressed, and the patient drowsy and semi-comatose; or febrile disturbance, with quickened pulse, and increase of the temperature, are observed. The adjoining tissues sympathise with the diseased bile-ducts; the bowels become constipated, vomiting is induced, the pleura often becomes affected, and I have several times seen effusion into the right pleural cavity. Again, the kidney becomes affected, the urine is scanty, often loaded with lithates, the gland becomes congested, and the urine may be albuminous. In one of the instances I have recorded the patient died with uræmic poisoning; in another the urine was albuminous, and the vomiting was very severe after the pain had subsided. These several complications seen during the passage of gall-stone are often obscure in character, and of great clinical interest.

To recapitulate. During the passage of gall-stones severe symptoms and even death may arise from—(1) the intensity of the pain; (2) inflammation of the bile-ducts, causing purulent collections; (3) inflammation external to the ducts, leading to abscess; (4) softening and ulceration of the ducts or gall-bladder, producing perforation and peritonitis; (5) ulceration into the duodenum, leading to the passage of the gall-stone into the intestine, and causing sometimes obstruction; (6) ulceration into the vessels, causing hæmorrhage; (7) pyæmia; (8) sympathetic affection of the kidney and uræmia; (9) extension of the abscess after perforation of the gall-bladder, which may reach the external parietes, and gall-stone be discharged through the skin. Several of these conditions are illustrated in the cases I have recorded. When the common bile-duct is obstructed all the smaller ducts become at first distended, the liver is enlarged, and the gall-bladder forms a pear-shaped sac at the edge of the ribs. If the obstruction become permanent, the bile-ducts attain a large size, and may be seen, on inspection after death, on the surface of the liver itself; but as bile does not continue to be secreted long after obstruction, mucus only is observed in the biliary passages. It is sometimes found that the gall-bladder becomes thickened, contracted, and, it may be, obliterated, from the secondary changes of inflammation in its walls. It is, however, rare for the obstruction from gall-stone to be permanent; this form of obstruction is generally due to organic pressure from tumours or from other causes.

In reference to the *diagnosis* of these cases, I would remark that every case of sudden pain at the region of the gall-bladder and jaundice is not necessarily due to gall-stone. Sometimes severe spasm is produced at the pyloric extremity of the stomach, pain and vomiting distress the patient, and the skin becomes sallow or actually jaundiced, the mucous membrane of the duodenum is congested and irritated, and there is partial closure of the bile-ducts; this state may be due to sudden chill, to the use of ardent spirits, or it may be caused by indigestible food. Again, renal calculus may produce pain and sickness which may be mistaken for biliary calculus; in these cases the vomiting may induce sallowness, but there is not the complete jaundice, and the urine in renal calculus contains blood. Again, severe neuralgic pain is often very intense, and, where no other cause may be found, has been attributed improperly to gall-stone; the pain may be strictly of a spinal character, or it may be the commencement of shingles. I have known intense pain in this region due to the formation of malignant deposit pressing apparently on the nerves behind

the liver. Acute diaphragmatic pleurisy is the cause of intense pain, sometimes with great sallowness of countenance, and as no physical signs are developed until the costal pleura is involved, a mistake is easily made. Local suppuration in the parietes over the liver is sometimes accompanied by jaundice, and simulates gall-stone. I have seen such an instance without any direct communcation with the liver. I would only add that the presence of local peritonitis may be a source of fallacy in the diagnosis of gall-stone. The hard mass of an accumulation of calculi in the gall-bladder may easily be mistaken for malignant disease.

With such possible complications the *prognosis* of gall-stone should always be guarded.

In the *treatment* we may greatly benefit our patient, not only in the relief of the intense pain, but in the promotion of the passage of the calculus, and in preventing recurrence. External remedies are of value; hot baths, hot fomentations and poultices should be used; the application of chloroform liniment and belladonna liniment may be tried, applied on flannel wrung out of hot water, or on spongio-piline; opium and its alkaloid morphia should be used freely; the hypodermic injection of morphia is of great service, but, unfortunately, sometimes induces sickness and faintness. Opium by the mouth does not easily become absorbed, the stomach also is irritable, and injection into the rectum of twenty or thirty minims of Battley's solution of opium in a tablespoonful of water or milk is often to be preferred. Opium by the mouth, although given freely, must be carefully watched; it is unsafe to continue its use after the pupils have become small and the respiration slow. Other means must then be used; thus we may employ the inhalation of ether and of chloroform cautiously. As to other means, the bowels are generally confined, and it is well to unload them, for a loaded colon increases the pain and retards the passage of the calculus. Several grains of calomel and colocynth may be used, or a free saline purgative, or a castor oil injection; podophyllin is too irritating a purgative, castor oil would be rejected, and milder purgatives are too slow in action. After the bowels have been freely moved, it is well not to continue the use of purgatives, especially if the bile-ducts are inflamed and there be local tenderness, for rupture of the duct may be caused or promoted. In an instance that I saw in consultation, where an irregular calculus produced partial obstruction of the duct, the bowels being confined, it was decided to use a gentle enema to act on the bowels; there was local tenderness in the region of the gall-bladder, but no peritonitis. Whilst the medical man was using the injection, which was gently done, the patient experienced a sensation as of a hot fluid in the abdomen. Intense pain and collapse quickly followed, and the patient died in a few hours. The gall-duct was found to have ruptured, and the extravasation of bile produced fatal peritonitis. In chronic cases where there is no pain, it is always desirable to prevent fæcal distension of the transverse colon; then aloes with soap, colocynth, small doses of podophyllin, saline purgatives, Carlsbad salts, and aperient mineral waters may be given.

During the persistence of pain it is important that the patient should remain at *rest*, and the recumbent position is the best; all pressure should be removed from the waist, and the lower part of the abdomen supported by a simple bandage. In this remark I do not refer to the period of intense agony during the passage of the calculus, but to a later period, when there is soreness and the occasional recurrence of more severe pain. I have seen many cases in which the convalescence was greatly retarded by the movements of the patient, and by out-door exercise, and especially by jolting movements. It is universally allowed that fresh air and exercise are most desirable in relieving the condition that conduces to gall-stone. The malady occurs in stout persons, especially women of sedentary habits, and who do not take sufficient exercise, but this part of preventive treatment must be postponed till all pain and tenderness have subsided.

The *diet* constitutes a most important part of the treatment of gall-stone. During the spasmodic attack no food can be taken; a little ice, milk, chicken broth, milk with soda-water, may be allowed, and if there be great prostration, it is well to use a nutrient injection containing a small quantity of ardent spirit; the stomach should be spared the irritant action of wine or spirit. For several days, or even longer, only the blandest diet should be taken, as milk, arrowroot, chicken, and mutton-broth, gradually passing to white fish, and then to stronger meats. Some of these patients complain greatly of flatulence, and the direction is often given to abstain from vegetables and fruit. This may be well for a time, but the health begins to suffer if no fresh vegetables are taken for longer than a month or six weeks. I was called to see, in consultation, a lady who had suffered from flatulence and dyspepsia, and had refused all vegetables for nine months. The prostration was very great, with faintness and large patches of purpura. Lemon-juice with steel soon relieved her symptoms. The rule should be not to allow diet that irritates the pyloric portion of the stomach and the duodenum, nor that easily ferments, and sugar should be avoided. When vegetables are first taken, I think that good potato, thoroughly boiled and made into a meal, is the best, although whole potato is very objectionable. Fats should be avoided, and especially when changed by heat. These patients are, I think, better without ardent spirits and without malt liquors; sometimes a dry wine or good Marsala is taken with advantage. In the preventive treatment there should be great care as to diet; fresh air and good exercise are most important; gentle action of the bowels should be maintained, and saline mineral waters are often most valuable.

(To be concluded.)

AURAL NOTES.

BY A. GARDINER-BROWN, F.R.C.S. EDIN.,
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I.—ASYNTROPHY OF THE RIGHT TEMPORAL BONE.

THE following case, sent me by Mr. Waren Tay, is, I think, one of sufficient interest to put on record.

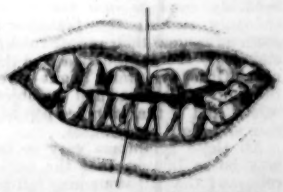
Rebecca C——, aged three years, apparently a healthy child, has a malformation of the right ear and an altered position of the lower jaw. The auricle is wholly deficient, except the anterior inferior quadrant, its only substitute being a narrow elongated lobule, commencing at a point corresponding with the situation of the upper part of the tragus, and extending about an inch and a quarter downwards. The upper portion of this contains an irregularly-shaped piece of cartilage; and the lower part, which is free, consists of a remnant of the lobe. The external meatus can be distinctly felt in the bone, and is entirely covered in by the soft parts. The situation of the osseous meatus is marked by a cross in Fig. 1.

FIG. 1.

Looking at the child full-face, the right cheek is seen to be decidedly flattened (Fig. 2); this, however, is rather

FIG. 2.

FIG. 3.



exaggerated in the drawing. The mouth is slightly drawn towards and elevated on the same side. Upon examining

the mouth, it was found that the symphysis of the lower jaw was not only thrown an eighth of an inch towards the right, but formed an angle, opening downwards, of eleven degrees with the mesial line of the face (Fig. 3). It will be seen by reference to this woodcut that the lower teeth from the first temporary molar on the left side to the central incisor on the right, although in a quite normal position as regards the lower jaw, leave a space of three-sixteenths of an inch (at its widest) between their edges and the upper teeth.

It is evident that if the evolution of one temporal bone does not proceed *pari passu* with its fellow, in an otherwise well-developed skull, the glenoid fossa on the faulty side will stand at a higher level and rather internal to the normal position. This condition is somewhat similar in its results to atrophy, but as it is arrived at by a different process, I have applied to it the term "asyntrophy," as, in my opinion, it at once expresses the cause and implies this as one of the defects. Such a change in the level and situation of the glenoid fossa will, of course, account for the altered position of the inferior maxilla. The following reasoning is, I think, correct of bones in general: If an asyntrophic bone, articulating on *one* side only, be carefully examined, it is found that the altered position of any given point from its normal situation is in arithmetical proportion to its distance from its *articulating* surface. When, however, it is articulated on *two* or *more* sides, the same law still obtains, though complicated in its operation owing to its acting in more than one direction, and being occasionally modified by muscular force, visceral thrust, or chemical change. The flattening of the cheek in this case seems to be *entirely* due to the altered position of the lower jaw-bone.

The family history of this child is interesting and important. The mother states that when she was three months advanced in pregnancy, her brother quarrelled with the father of the child (owing to some delay in the marriage ceremony), and struck him a severe blow with the fist behind the right ear, causing it to bleed; whereupon the mother screamed out, "Oh, my ——, his poor ear," at the same time putting her hand on her right ear, and pressing it forwards. She says she carried the child the full time, and that it was "frightfully cross" for the first six months, on which account she freely administered "sleeping stuffs."

The father "caught cold" in his right ear nine years ago, whilst on a voyage from Australia, and has been quite deaf on that side ever since, the ear frequently discharging.

One of the mother's sisters, aged thirty-two, suffers from right hemiplegia and frequent recurring epileptic fits, and another has a child, aged five, with spinal curvature and enlarged epiphyses.

HYSTERICAL HEMIANÆSTHESIA OF THE LEFT SIDE; DEFECTIVE ELECTRICAL EXCITABILITY OF THE RIGHT CEREBRAL HEMISPHERE.

By THOMAS BUZZARD, M.D., F.R.C.P.,
PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

THE result of an electrical examination in a case of hysterical hemianæsthesia at present under my care in hospital appears of sufficient interest to merit record. The patient, a girl thirteen years old, was admitted on account of contracture of the left arm; the thumb and forefinger being flexed upon the palm, the hand flexed at the wrist, and the forearm at the elbow, the muscles rigid. The condition had supervened upon a great moral shock (the death of her father) a fortnight before. It was discovered on examination by Mr. Broster, resident medical officer, that there was anæsthesia of the left half of the body.

When I saw the girl, six days after her admission into the ward, the contracture had entirely disappeared, but there seemed to be still profound anæsthesia of the left arm, and, to a less degree, of the left half of the face and the left lower extremity. Neither a touch nor pinch nor prick, according to her account, could be felt in the left arm and left side of the neck, and very slightly in the left side of the face and left leg.

Remembering to have read, a short time since, in some German medical journal, of certain observations made upon the electrical excitability of the opposite hemisphere in a case of hysterical hemianæsthesia, it occurred to me to test the condition in the present case. The following was the mode of procedure which was adopted. I placed the negative pole (sponge rheophore) of a Smee's battery on the nape of the neck, and the positive pole upon the left temple. The battery, I should say, had somewhat run down. With 10, 15, and then 20 cells, the current being occasionally interrupted, the patient asserted that she felt nothing at all. The sponge rheophore being transferred to the right temple, pricking and painful burning of the skin was complained of. I then put on a force of 30 cells and interrupted the current by a toothed wheel. With this application to the left temple the patient reeled so as to require support on her chair, and manifestly experienced a very powerful shock, which she described as excessive giddiness. It was a minute or two before she recovered her equilibrium. The sponge being now transferred to the right temple, the same strength of current being employed, there was a striking difference in the result. The patient required no support, and being questioned, said that she was a little giddy only. Her manner, more important evidence perhaps than any statement, showed that the application was quite tolerable. I again applied the rheophore to the left temple, with the same result of excessive and almost alarming giddiness.

The following facts should be mentioned in reference to the care with which the observation was made. (1) I had said nothing of my intention to anyone; and the resident medical officer who assisted me was quite in ignorance of the object of the application. He unreservedly testified to the different effects produced by the applications. (2) I took care beforehand to moisten the skin of the two temples with warm salt-and-water to exactly the same extent; the sponge was applied with equal pressure to the two temples; and the interruptions of the current were equally numerous, and brought about in precisely the same manner, in each instance.

The day after the applications there was some return of sensibility in the left arm. The current being applied as before to the temples, no difference in the result on the two sides could be now observed.

There has long been, and indeed is still, a fundamental difference of opinion in regard to the question of hysterical hemianæsthesia, some observers being convinced of the reality of the condition, whilst many others see in it only a vagary of the patient who refuses, for some reason, to acknowledge the existence of sensibility in one half of the body. I cannot help thinking that the observation which I have described lends support to the opinion that the condition is a *bonâ fide* one. It will at once be recognised that, supposing the hemianæsthesia in this case to be assumed, the patient would naturally have asserted that the application on the so-described anæsthetic temple produced less shock than that upon the side in which the skin retained its natural sensibility. As I have described, the reverse obtained most unmistakably. We have it, then, that in this case the right cerebral hemisphere—which, if the anæsthesia of the left half of the body were real, would be the hemisphere in fault—appeared to be considerably less excitable by the interrupted voltaic current than the left.

The fact must stand for what it is worth. It would be incautious to conclude very much from a single examination of the kind, which, however, derives a certain importance from its confirming the experience of another observer (whose name I regret being unable to recall), and, if supported by still further observations, is likely to lend important aid towards the solution of one of the most difficult questions in neuro-pathology.

Grosvenor-street, W.

ON THE

VALUE OF THE DEPENDENT POSITION OF THE HEAD IN OPERATIONS ON THE MOUTH AND THROAT.

By THOMAS ANNANDALE,
REGIUS PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF EDINBURGH.

EIGHTEEN months ago, when removing the greater part of the lower jaw, including its symphysis, I tried the plan of allowing the patient's head to fall over the edge of the table. Although the tongue immediately fell back towards

the posterior wall of the pharynx after the attachments of the tongue to the jaw had been freely divided, the man's breathing was perfectly easy—much more so than when the head was raised or lay level with the trunk. Before the patient left the theatre I demonstrated this fact several times to the students present, and thoroughly convinced them and myself of its correctness.

The experience of this case led me to place the head in the same position in my next operation on the throat (thyrotomy); and since then I have performed many operations in this way on the mouth and throat with complete success, and with great facility as regards the prevention of blood passing into the air-passages, the obtaining a good view of the parts, and the carrying out of the necessary manipulations.

Among the operations in which I have used this method have been, a second case of thyrotomy, two cases of tumour of the palate, one case of large epulis, and three cases of cleft palate. In all these operations I have been impressed with the advantages of this position of the head. Complete anæsthesia by means of chloroform, or a mixture of chloroform and ether, has been kept up without any inconvenience during the whole proceedings.

My present method of keeping the head in this position is to have it hanging over the end of the table and supported there by the hands of an assistant; but I am having a little addition made to my operating table which will allow the head to be supported in this position more efficiently.

Edinburgh.

A NOTE ON

VASO-MOTOR AND TROPHIC NEUROSES.

BY THOS. STRETCH DOWSE, M.D., F.R.C.P. ED.,

PHYSICIAN TO THE HOSPITAL FOR PARALYSIS AND EPILEPSY, REGENT'S-PARK; FORMERLY PHYSICIAN SUPERINTENDENT OF THE CENTRAL LONDON SICK ASYLUM.

(Concluded from page 648.)

I DO not profess to consider fully in the present communication the nutritive lesions which are due to injuries of nerves, but I will just take a brief glance at such conditions, in order to express my present ideas the more clearly and with some completeness. Schroeder van der Kolk, Brown-Séquard, and our countryman J. Reid, have shown that in the severance of the sciatic nerve the muscles, bones, and skin become atrophied, and that this was not so much in consequence of their being dissociated from the nervous centres as in consequence of the functional inaction of the paralysed member. The best practical example with which I am acquainted for showing how lesions of nutrition, caused by central disease of the brain and spinal cord, follow a direct histological law, is that of bedsores, which spread with such alarming rapidity over the lower part of the spine and buttocks. For instance, in a case of apoplexy in which the hæmorrhage exists only in one hemisphere of the brain, with paralysis of the opposite limbs, we invariably find that the destruction of tissue commences in and is limited to the buttock of the paralysed side. On the contrary, when a bedsore is of acute spinal origin, it occupies the median line over the sacrum, and extends symmetrically on either side towards the surrounding textures. The same rule holds good in lesions of nutrition of the lower limbs from spinal softening; if the softeuing be bilateral the lesions will be bilateral, or if the softening be unilateral the lesions will usually be unilateral. These are facts well known to the experienced physician and surgeon. I bring them thus forward because I am strongly inclined to believe that they form the best data on which to rely as proof that the vascular derangements and troubles of nutrition, such as skin diseases, bedsores, wasting of muscles, &c., which are made evident to us during life, follow precisely the same law in producing degenerative changes and functional disorders throughout the whole course of the cerebro-spinal sympathetic system, and are, in fact, the cause or causes of most of the so-called nervous affections which we have under our consideration.

In the first place, I will note some of the classical examples of diseases well known to us, and which are more or less essentially due to defective nervous influence in the regulation of nutrition, secretion, and circulation. Of these, Graves' disease, angina pectoris, hemicrania, and atrophy and hypertrophy of the muscles, skin and its appendages, are, perhaps, the most noteworthy. In Graves' disease we have a condition which certainly of late years has been looked upon in the light of a neurosis, by Handfield Jones, Fletcher, Laycock, von Graefe, Trousseau, and others. Of this disease the three cardinal symptoms and signs are, protrusion of the eyeballs, palpitation of the heart, and an enlargement of the thyroid gland. It is not necessary that these characteristics should occur simultaneously, but they are usually associated, in a more or less marked degree, during the course of the disease. That this disease is due to an especial idiosyncrasy of the nervous system cannot, as far as my observation goes, be doubted for one single moment. Undoubtedly there are exciting causes, yet the influence which they exercise can be referred without much difficulty to their action upon the vaso-motor, sympathetic, and trophic nerves. We have seen what takes place when the cervical sympathetic is both irritated and divided; now the analogy between these alterations of function and what we meet with in Graves' disease is deserving of consideration. The dilatation of the vessels is indicated by the strongly pulsating, prominent, and frequently tortuous little arteries, which are in this region supplied by the carotid arteries, and again more especially by the swollen arteries of the thyroid gland. The coming on of goitre so quickly, in the course of a few days, the softness of the swelling, the perceptible pulsation of the thyroid arteries, the loud blowing sound which is heard over them, the rapid increase and decrease of the tumour, according to the force of the contractions of the heart, and the engorged condition of the veins so frequently seen on the surface of the gland, all these clearly point to the conclusion that we have to do chiefly with a dilatation of the vessels which are distributed in the thyroid body, and this conclusion is fully borne out by anatomical investigation.[1] To say nothing of the extreme discomfort to the patient, caused by the palpitation and rapid action of the heart, there is one especial feature of this disease which is of the highest practical value, and which is deserving of careful consideration—I mean the protrusion of the eyeballs. This protrusion is not often confined to one eye alone, but usually extends to both eyes.[2]

Eulenburg and Guttmann[3] have shown that, after division of the cervical sympathetic, no exophthalmos occurs, but rather a sinking of the eyeball within the orbit. If, however, the central end of the divided nerve be subjected to electrical stimulation, the eyeball is protruded, and we have exophthalmos. Again, it has been shown that exophthalmos follows irritation merely of the cervical sympathetic system, yet I would not have it to be inferred that this protrusion of the eyeball is due entirely to interchange, as between it and the cervical ganglia of the sympathetic, since any serious check to the circulation of blood in the head will produce similar effects.

In angina pectoris we find a grouping together of symptoms which show pretty clearly that it is a neurosis, although the coronary arteries have undergone atheromatous and other changes. For instance, we have the paroxysmal character of the pain in the region of the heart, and usually extending over the left side of the chest and down the left arm, and sometimes down both sides and arms, with an associated sensation of anxiety and constriction and of other vaso-motor and sensitive disturbances. Laennec called it "neuralgia cordis," Trousseau "an epileptic form of neuralgia," and Stokes "an hyperæsthetic state of a weakened heart." Barkow even called it "a trophoneurosis of the heart," and, indeed, various other names have been given to it by different observers. The true condition of it, however, as far as we know, has been determined by the modern researches of physiologists, and notably by those of Lauder Brunton.[4] Eulenburg and Guttmann have given to this subject considerable attention.[5] They say truly that in discussing angina pectoris they are unable to argue from the state of any one system of cardiac nerves, and that they can

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[1] Eulenburg and Guttmann: Sympathetic System of Nerves, 1879. Naumann: Deutsche Klinik, 1853. F. Banks: Dublin Hosp. Gaz., 1855. Fournier et Ollivier: Union Méd., 1868, p. 96.

[2] Chisholm: Med. Times and Gaz., 1871.

[3] Op. cit. 1879.

[4] THE LANCET, 1867, and other communications.

[5] Eulenberg: Angina. Ziemssen's Cyclopædia of the Practice of Medicine, vol. xiv. Eulenberg and Guttmann: Sympathetic System of Nerves, 1879.

only analyse the symptoms physiologically, and endeavour to show, on experimental grounds, in what way the different systems of nerves may be concerned in producing this disease. I will not here attempt to enter into their arguments.

A teaching and instructive lesson is offered to us in the action of the remedial agents which are employed in the treatment of this singular affection. I allude more particularly to those two drugs, the nitrite of amyl and the secale cornutum, both which exercise such a specific and definite action upon the circulatory system of nerves. I have used these remedies with really charming results. The chief action of the first-mentioned, as far as I could make out, consists in paralysing the vaso-motor nerves and in equalising the general blood-pressure.

In progressive hemiatrophy of the facial muscles, as well as in muscular atrophy, and in muscular pseudo-hypertrophy, we have conditions which are more or less intimately associated with vaso-motor and trophic derangements. Vague theories have, from time to time, been brought forward in regard to these diseases. Nothing, however, is decidedly known with regard to facial wasting; yet it would appear, from the observations of such careful neurologists as Romberg, Berson, and Samuel, that it is considered as being connected with the nerves of nutrition. Stilling believed it to be the result of disturbed function in the vaso-motor nerves, especially in those filaments which are included in the trigeminus, and which are destined for the vessels of the head. Brunner has lately recorded one striking instance of unilateral atrophy of the face, and which, he believes, points to a diseased state or a condition of permanent irritation of the cervical sympathetic. Brunner thinks that the symptoms recorded in his case correspond to the state which is experimentally produced in animals by galvanisation of the divided cervical sympathetic or of its ganglion supremum.

It is as yet a question as to the part played by the sympathetic and vaso-motor nerves in the production of atrophy and hypertrophy of muscles. However, it has been fairly substantiated that in progressive muscular atrophy there is more or less degeneration of the anterior roots of the spinal nerves and of the large motor and other cells of the grey matter of the anterior cornua of the spinal cord; but whether this change be primary or secondary to other changes in the peripheral vaso-motor nerves is not as yet decided. The generally accepted doctrine, however, is that which has been promulgated by Charcot, Lockhart Clarke, and many other recent observers—namely, that it originates in the cornua of the grey matter of the anterior columns.

Schneevogt first drew attention to the accompanying affection of the sympathetic in this disease. In the case investigated by him, the brain and spinal cord were normal as far down as the fourth cervical nerve, and considerably softened and extensively infiltrated with finely granular fat and granulation cells. From the fifth cervical to the second dorsal nerve, the posterior roots of the cervical nerves were unchanged, but the anterior were strikingly thinned, and especially the five upper, which consisted only of some very slender filaments. The cervical cord of the sympathetic was almost converted into a cord of adipose tissue, in which the nerve-fibres were replaced by flat cells containing crystals. The cervical ganglia had almost completely degenerated into fatty tissue, while the thoracic part of the sympathetic likewise contained some fatty matter. From the stages of the different processes which Jaccoud examined in two of his patients, he regards it as unquestionable that the disease began in the cervical sympathetic, and spread thence both centripetally and centrifugally to the surrounding nervous structures.[6]

If the evidence in respect to the origin of the disease of muscular atrophy be so conflicting, it is much more so in respect to pseudo-hypertrophic paralysis. By some this paralysis has been considered as a primary affection of the muscles, and by others as a neuropathic disease. Griesinger[7] considers it to be a disease essentially of the vaso-motor nerves; and Benedikt[8] mentions it among the "trophoneuroses," and believes one of his cases to have been a paralysis of the sympathetic. In a case investigated by M. Charcot the state of the spinal cord and peripheral nerves was entirely a negative one. In a case recorded by Eulenburg,[9] in which Cohnheim made the examination, the result with respect to the nervous system was perfectly negative, and microscopic examination revealed no pathological changes either in the brain, the spinal cord, medulla, peripheral nerves, or sympathetic system.

A very great deal has yet to be learned in reference to this subject; yet, as clinical observers, we can but feel greatly indebted to the physiologist, who has of late years done so much to make the bedside study of disease scientific and pleasurable, rather than a mere question of pain, tongue pulse, and bowels.

Old Burlington-street, W.

[6] Jaccoud: Bulletin de la Soc. Méd. des Hôpitaux de Paris; Union Méd., 1865, tom xxv., No. 4, p. 60.
[7] Archiv der Heilkunde, 1864 (5ter Jahrgang), p. 171.
[8] Elektrotherapie, Wien, 1869, p. 86, ff.
[9] Eulenberg, Berl. Klin. Wochenschrift, 1865.

CASE OF

STONE IN THE BLADDER; LITHOTRITY AND REMOVAL OF FRAGMENTS BY MEANS OF BIGELOW'S APPARATUS AT ONE SITTING.

BY WALTER J. COULSON, F.R.C.S.

FRANCIS M——, aged twenty-eight, bootmaker, came under my care on Sept. 25th, 1879. He had suffered for the last eighteen months from frequency of micturition, great pain along urethra and at extremity of glans penis, especially after micturition, occasional retention of urine, and occasional slight hæmaturia. The calls to pass urine at the time of my seeing him were very frequent, about every quarter of an hour during the day. Much straining accompanied the act. During the night, however, he was more comfortable, and was disturbed but once or twice. He was a thin, pale man; for some time past his symptoms had prevented him from following his employment, and he had not been able to obtain sufficient food. Urine light yellow, acid reaction, sp. gr. 1018, deposited a cloud of mucus; no albumen and no casts of tubes. Evening temperature 99°.

A calculus was detected on sounding, and the patient was ordered to remain in bed for a few days.

On Oct. 1st, chloroform having been administered, I introduced a flat-bladed lithotrite and crushed the stone several times. The instrument was then withdrawn, with some detritus between its blades. Another lithotrite was introduced, and the fragments repeatedly caught and crushed, in all eleven times. Bigelow's apparatus was then used, and fragments and débris, weighing thirty-five grains, were drawn into the receiver. A lithotrite was again introduced and the bladder explored, but no fragments of calculus could be detected. The operation lasted twenty-four minutes. There was no trace of hæmorrhage. The calculus was found to be composed of uric acid. The operation was not followed by any symptoms of rigor. The urine passed an hour afterwards was very slightly tinged with blood, and contained a very small quantity of fine detritus, fine enough to pass through the muslin used as a filter.

2nd.—Has slept well, but complains of slight headache. Tongue clean, appetite bad. Temperature: Morning 102°; evening 104°. Urine contains a little fine dust and some amount of mucus.

3rd.—Complains of wandering pain about the body generally. Appetite still bad. Can retain his urine for an hour at a time; there is still a slight sediment of fine dust. Evening temperature 105°. A saline aperient ordered.

4th.—Feels better. Has no pain in passing urine, which is now free from deposit. Temperature 100°.

On the 8th the patient expressed himself as feeling very well. He had been allowed to leave his bed since the 4th. He could retain his urine for three or four hours at a time without discomfort; there was only a little smarting along the urethra on micturition. Temperature normal. Examined the bladder with a lithotrite; no fragments of stone could be found. Ordered a mixture with bicarbonate of potash.

On the 9th his cure was complete.

The ease with which the stone was dealt with, and the fact that by far the greater portion of it was removed from the bladder at a single sitting, suffice to demonstrate the advantages of Dr. Bigelow's method when applied to suitable cases. After the withdrawal of the evacuating catheter, all

that remained of the calculus in the bladder was a small quantity of finely-powdered débris. There were no fragments large enough to cause irritation, and hence the almost complete absence of those constitutional and local symptoms which sometimes follow lithotrity when the calculus is only partially broken up. The manipulations also were well borne by the bladder.

On this occasion I used a curved catheter similar in size to Bigelow's straight catheter. I have since used the latter instrument, and found it to be perfectly easy of introduction, while it allows the fragments to escape more readily.

Harley-street, W.

A CASE OF XANTHELASMA MULTIPLEX: VEL VITILIGOIDEA (ADDISON AND GULL); VEL XANTHOMA (FRANK SMITH); VEL MOLLUSCUM CHOLESTÉRIQUE (BAZIN).

BY T. CQLCOTT FOX, M.B. LOND., B.A. CANTAB.,
PHYSICIAN TO THE ST. JAMES'S AND ST. GEORGE'S DISPENSARY.

THE general form of the disease named above is sufficiently rare that observers have usually recorded any case they have met with, and Dr. Pye-Smith has collected such cases in the twenty-second volume of Guy's Hospital Reports. To his list may be added three cases observed in France—namely, by Bazin, in a boy aged sixteen years,[1] who suffered for five months previously with enlarged liver and jaundice; by Hillairet, in a woman aged forty-four, who had a jaundice of little intensity, and enlarged liver for five months;[2] and by Chambard,[3] in a woman. I have also seen two other as yet unpublished cases, one of which was in a middle-aged woman, who was under Dr. Ringer's care in University College Hospital with chronic jaundice, and who afterwards died in the Middlesex Hospital with xanthelasma of the eyelids and hands. The case I am now going to detail has important differences from any yet recorded.

Miss F——, aged twenty-one years, was sent in February last to Dr. Tilbury Fox, and has of late been under my care. The family history obtained stated that on her *paternal* side the tradition is that there was real active gout passing over a generation and coming out in an active form in the next. Her grandfather had constant attacks, but lived till eighty-six. Her father suffered from "suppressed gout." On her father's maternal side "gouty rheumatism," or "rheumatic gout," developed at eighteen years of age in the young lady's grandmother and great-aunt, the former and a third sister dying young of consumption. On her *maternal* side there is active gout in both families, and several members have died prematurely of cancer.

Miss F—— was always a pale, delicate child, but grew fairly well for fourteen years, when she seemed to stop short, and in no way to develop until after the age of eighteen. Since then, however, she has grown in inches, developed in figure, and gained more freshness of complexion, owing, it is thought, to the influence of constant sojourns at Buxton. Her periods, which commenced when she was fifteen, were for some time very troublesome, but have lately occurred with more regularity. When she was between twelve and eighteen months old the nurse called attention to "some small yellowish-white patches like little bunches of white currants just around the back passage." These patches have been watched, and until the age of fourteen they increased in size and numbers, and became confluent; but since that age they have been stationary. When aged seven years and a half she had a mild attack of small-pox, which has not left any pitting, accompanied by swelling and pain at the back of the right os calcis. A few months after this attack, seed-like patches of xanthelasma appeared on the knees, and became confluent. At ten years of age she had a severe attack of nettlerash, and also complained about this time of severe pains in the limbs, pronounced to be "growing pains." At the age of fifteen swellings gradually appeared on the hands about the phalangeal and metacarpo-phalangeal joint, but no idea of rheumatism was entertained. The swellings and eruption were considered by several distinguished physicians and surgeons to be of a gouty nature, but under douching the mischief rather increased. At the age of seventeen a tuberose xanthelasmic patch, as big as a florin, appeared on the ball of each great toe, giving at first sight the impression of gouty enlargement of the joint. Considerable-sized patches also came in the webs between some of the fingers and by the side of one thumb.

When examined in 1879 the patient presented also a tuberose patch on the back of each elbow, on the left as large as a shilling, and on the right still larger. These probably appeared between her seventeenth and eighteenth years; at any rate, they were then first noticed. The joints were still enlarged, and the back of the right os calcis outgrown, less so than formerly. No fresh xanthelasmic patches had made their appearance for several years. *There were none on the palms, or soles, or eyelids, and she had never suffered from jaundice.* On searching for the cause of constant pains in the chest and shortness of breath, a loud mitral regurgitant murmur was heard, and it was elicited that Miss F—— had been brought up in a locality highly conducive and renowned for rheumatism. She complained, indeed, that any kind of damp weather, or an east wind, painfully affected her joints, and congested her throat directly. In the winter of 1878-9 it is to be noted that she had a second severe attack of nettlerash, lasting three weeks. The liver was normal in size and the urine healthy when examined on more than one occasion. There was no pruritus. As Miss F—— was anxious to be rid of her disfigurement, the more conspicuous patches were removed by Mr. George Lawson with very satisfactory results, and there has as yet been no fresh outbreak.

Microscopical examination. — The very characteristic patches which were removed were subjected to a careful study and comparison with xanthelasmic patches removed in two cases from the eyelids, and clear corroboration was afforded of their nature. The appearances agreed in all respects with the two general cases examined by Chambard (*loc. cit.*), and with those eight cases collected by Dr. Pye-Smith in which the microscope was used. The epithelial layers took no active part in the disease, but the lowest cells contained yellow pigment. The corium throughout, but more particularly in the upper middle layer, was packed with more or less rounded or polygonal cells, almost as large as fat-cells. These cells contained one or more nuclei (generally two or three), deeply staining by logwood, and imbedded in the granular opaque mass which distended the cell wall. The fat-containing cells were crowded together in great number towards the centre of the nodule, to the total obscuration of other elements of the tissue, but at its periphery the cells were seen to occupy the meshes of the tissue in groups. The fibrous tissue was increased and compressed by the pressure of the new cells, and there was considerable engorgement of the outlying vessels and outwandering of leucocytes. We know that these appearances are explained by the facts that, firstly, an irritant process has been set up in the particular part of the skin, leading to considerable cell proliferation; and that, secondly, a fatty degeneration, or, as Virchow, Waldeyer, and Kaposi think, an oily infiltration, has occurred in these cells. I was unable to observe the thickening of the walls of the small arteries, of the sheaths of the nerves, and of the fibrous capsules of the sudoriparous glands noticed by Chambard.

Remarks.—In this case three points are of more special interest—viz., the age at which the eruption commenced to appear; secondly, the absence of the eruption from the eyelids and palms, its usual sites; and, thirdly, the absence of any apparent affection of the liver and precursory jaundice. Xanthelasma is an affection of middle or advanced life, but it occurs somewhat earlier in the multiple forms immediately associated with jaundice. Bazin's case was in a boy aged sixteen years, and there was a doubtful case of Dr. Barlow's, aged eighteen years. The present case is therefore remarkable in commencing at the age of from twelve to eighteen months. This case also confirms the fact that whilst the special seats of selection for the eruption are on the palms and eyelids, in very exceptional cases these localities may be free. With regard to jaundice, Dr. Pye-Smith says "that in every case but two, in which the skin affection had spread beyond the eyelids, there was jaundice," and in one of the two jaundice came on a year later. Both Bazin's and Hillairet's cases also were jaundiced, but Chambard omits the mention in his case. In the present case there has been no suspicion of jaundice at any time.

[1] Copies of the wax models of this case in the Hôpital St. Louis Museum are to be seen in the Dermatological Collection of the Royal College of Surgeons.
[2] Bull. de l'Acad. de Méd., Nov. 19th, 1878. [3] Loc. cit.

This brings us, lastly, to the consideration of the etiology of this affection. It is evident from this case, and from the ordinary cases of X. palpebrarum, that the circulation of biliary pigment is not the only cause of this eruption, but it is probable, from the strong family history of gout, the occurrence of urticaria, &c., that here there existed chronic functional disturbance of the liver with the consequent circulation of abnormal products.

Harley-street.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CASES OF FRACTURE OF THE BASE OF THE SKULL.

(Under the care of Mr. HULKE.)

THE loss of blood continuing for several hours, followed by serous oozing from the left ear, which continued till the end of the second day, considered in connexion with the other symptoms, and the distance of the fall—twenty-four feet,—raises a strong presumption of fracture of the base of the skull in this case. The convulsions of the right arm were ascribed to superficial laceration of the left cerebral hemisphere.

CASE 1. *Fall from a height of about twenty-four feet; bleeding, followed by serous oozing, from the left ear; recovery.* —Shortly before 10 P.M. on the 25th of July, 1876, a little boy, aged six, fell from a second-floor window on to the leads of a portico, and thence upon the street pavement. The entire distance was thought to be about twenty-four feet. He was taken at once to the hospital. When admitted into Percy ward consciousness had returned; blood was trickling from the left ear; the left side of the head and brow were bruised and swollen; and there were numerous bruises on his body and limbs. Next day he was drowsy; he occasionally retched; the axillary temperature was 99·8°; pulse 120. A serous fluid replaced the bleeding from the ear. The right arm was convulsed. The head was shaved and kept cool with ice, and a purge was given him. On the 27th the serous oozing from the ear ceased, and the right arm was less convulsed. From this time his condition improved gradually, and at the beginning of September he was discharged convalescent.

CASE 2. *Fracture of the right temple and orbital roof; subconjunctival ecchymosis on the following day; broken ribs; death on the eleventh day from the chest complication.* —In the forenoon of August 17th, 1874, a labourer, aged forty-two, who had just before fallen off the roof of a house (it was supposed forty feet high), was admitted into Broderipp ward. He was insensible; blood was flowing from his right ear and nose; his breathing was embarrassed, and several ribs were found broken on the left side of the chest. Consciousness returned towards evening. Next day there was considerable subconjunctival ecchymosis of the right eye; in the evening his breathing, which had been easier after the broken ribs had been supported and fixed with long strips of adhesive plaster, became very distressed; he had a sharp stitch and cough, with muco-purulent sputa. The left side of the chest was jacketed with a large poultice, and as the dyspnœa increased, the house-surgeon at midnight cupped him, which was followed by relief. From this time his condition improved until the 25th, when his breathing became very quick and shallow, his face was blue, and his dyspnœa very great. The loss of several ounces of blood from the arm afforded marked relief. Three days later the difficulty of breathing returned. Another bleeding failed to give relief, and he died at 10 P.M.

Necropsy.—A radiating fissure was found in the right temporal fossa, implicating the temporal, parietal, and frontal bones. Corresponding to these cracks was a thin blood-clot outside the dura mater. No trace of injury was found in the brain. Five ribs—from the second to the seventh inclusive—were found broken. The lungs, bound to the chest-wall by old adhesions, were much congested, and the bronchial tubes were choked with mucus.

CASE 3. *Fall upon the ground; chin grazed; bleeding from both ears; laceration of the membrana tympani.*—In injuries of the head it is a recognised axiom that bleeding from the ear is not strong evidence of fracture of the base of the skull, unless it is copious and prolonged. In this case it appears to have been due simply to injury to the tympanic membrane, caused by the violent impact of the condyles of the mandible on the floor of the tympanum. This impact has been sufficient in some instances to drive the condyle through it, and split the temporal bone, as in the well-known preparation in St. George's Hospital Museum. On May 24th, 1874, a schoolboy, aged ten, whilst playing at "touch," slipped and fell, striking his chin on the ground, and cutting it. He was stunned, but he soon regained consciousness. When taken into the hospital very shortly after the accident, he was pale and faint, and blood was trickling from the external meatus of each ear. (He had also a convergent squint, but this was of older date.) The bleeding, though never copious, did not wholly cease till the 29th. On the 30th a watch was heard to tick at three inches from the left ear, and at eight inches from the right; before the accident his hearing was believed to have been naturally acute. On June 7th, on examination with a speculum, a small recent scar, partially hidden by a minute blood-clot, was detected in the upper part of the membrana tympani, in the left ear. The bottom of the right meatus externus was blocked by a clot which it was not judged prudent to remove. After the shock, which was slight, had passed off, he continued free from head symptoms, and on June 14th he was discharged from the hospital convalescent.

QUEEN'S HOSPITAL, BIRMINGHAM.

CASE OF DERMOID CYSTS OF PAROVARIUM AND OVARY; OVARIOTOMY; DEATH.

(Under the care of Mr. JOHN CLAY.)

FOR the following interesting notes we are indebted to Mr. J. Lloyd Thomas, obstetric assistant.

R. S——, aged fifty, widow, married when seventeen years of age, and the mother of seven children, the youngest of whom was nineteen years old, was admitted in August last. Her mother died at thirty-eight years of age from phthisis. One brother is living. Three sisters died from phthisis. She always enjoyed very good health during married life; had good confinements and convalescences. About ten years ago she felt two lumps of the size of a hen's egg, one on each side of the abdomen. They eventually became larger, and appeared to be joined into one mass, and she felt as though she was in the fifth month of pregnancy, but menstruated regularly. The tumours began to increase rapidly twelve months before admission, and increased in size up to the time of her entering the hospital.

The patient had an anxious expression, was moderately well nourished, of dark complexion, with dark-brown hair, which did not fall off. The tumour occupied the umbilical and hypogastric regions, with a slight deviation to the left side. It appeared flattened and hard, with well-marked border superiorly, which was on a level with the umbilicus. The measurement from the ensiform cartilage to the umbilicus was 4½ in.; that from the latter point to the pubes was 9 in. The circular measurement at the umbilicus was 33 in. There was dulness over the whole of the tumour, and the abdominal integuments were œdematous. The cervix and os uteri were normally situated. No tumour could be felt in either cul-de-sac, nor was there any impulse conveyed to the finger in the vagina by external manipulation of the tumour. The uterus measured 2½ in. The tumour was aspirated, but only some caseous matter was withdrawn. As it interfered with the patient's occupation as a hawker, she was very desirous to have it removed, and after mature consideration ovariotomy was determined upon.

On August 27th, Mr. Clay made an incision between the umbilicus and pubes 4½ in. in length, on the median line. The integuments of the abdomen were œdematous and thickened to the extent of an inch and a half. There were some firm adhesions to the abdominal wall; these were broken down, and the tumour was then easily removed from the

abdomen. It was found to be situated between the layers of the broad ligaments. The omentum in the vicinity of the tumour was malignant, several ligatures were applied and the whole of the diseased mass was removed. There was no hæmorrhage, as not more than one ounce of blood was lost during the operation.

Between the layers of the great omentum an abscess was found, containing about an ounce of fetid pus. On further exploration another tumour was discovered, situated between the broad ligaments on the left side, and was removed without difficulty. The ovary connected with this tumour was enlarged to the size of a goose egg. The right ovary was healthy.

The patient recovered from the operation very well, and had no troublesome symptoms whatever, excepting a slight cough which she had for some weeks before the operation. However, after forty-three hours severe symptoms indicative of pneumonia set in, from which the patient died in a few hours.

On examining the tumours the two large ones were each as large as a full-sized fœtal head. They were filled by caseous matter, in which were interspersed a large quantity of loose hairs about three inches long and of a brownish colour. A portion of the interior of the cyst, about two inches square, resembled a piece of the scalp, having a number of long hairs attached to it. One of the tumours contained two perfect molar teeth. The small tumour of the ovary was filled with the same kind of hair mixed with caseous material.

BRIDPORT COTTAGE HOSPITAL.

CASE OF PARACENTESIS THORACIS IN RECENT PLEURITIC EFFUSION.

(Under the care of Mr. G. M. EVANS.)

R. L——, aged twenty-eight, male, labourer, single, and temperate. Previous and family history satisfactory. He was first seen on May 31st, 1878, and complained of pain in the left side, and of shortness of breath. He had first found his breath short about a week before (having taken cold, as he supposed), accompanied with more or less pain, which, however, at no time seemed to have been acute. He had no cough, and could lie in any position. He did not seem to be greatly distressed, seeing that he had walked a distance of at least six miles.

On examination, the left side measured one inch and a quarter more than the right. The left back was absolutely dull; the breath-sound distant, shrill, tubular; vocal vibration was almost absent. The voice-sound was shrill, as if he was speaking through a pipe. There was evidently fluid in the left pleural cavity of recent origin. He suffered so little distress that he actually insisted on walking six miles home again. Two blisters and some medicine were given to him, and he went away.

On June 4th he came to the hospital, but he did not come *on foot* this time. He said he could hardly reach his home on the former day.

On the 5th, his breathing was very distressed. He could not lie down, and was unable to sleep; he had difficulty in swallowing even small quantities of milk, in consequence of want of breath. The heart was pushed over to the right side. The left side of the chest was visibly larger than the right. No breath-sound could be heard up to about the level of the nipple except a very distant tubular sound; above this the sound was more distinctly bronchial. There was absolute dulness on percussion all over the chest in front and behind, and vocal vibration was absent. With the sanction and assistance of Mr. Scott, five pints and five ounces of clear straw-coloured fluid was drawn off with the aspirator, the needle being introduced in the usual place. The operation was at once followed by considerable relief, and a couple of hours later the patient was lying comfortably on his right side, and breathing easily. The dulness at the upper part of the left side in front was markedly less, and vesicular breathing was audible. The next day the heart was beating in its proper place; he had slept comfortably all night, and vesicular breathing could be heard behind.

He remained in the hospital for three weeks. There was no return of fluid, and he continued free from distress. On June 27th vesicular breathing was audible over nearly all the left side behind, accompanied by a rub. The measurement was the same on both sides. Vocal vibration had returned; the percussion note was still wooden. He then went home, and was soon able to go to work.

On July 18th he was seen and examined. He seemed quite well; vesicular breathing could be heard everywhere, and without a rub.

Remarks.—Though there was recent effusion into the left pleural cavity, there was little or no history of an "inflammatory" stage; no stitch, no cough. The fluid, moreover, though considerable in quantity (to judge from the physical signs), was not so extensively poured out but that the patient could undergo a good deal of exertion without great distress. This may have been because as yet the heart and large vessels had not been interfered with. His walk home, which he described as a very tedious and painful proceeding, caused more fluid to be effused; the heart's action was interfered with by reason of the displacement of that organ, and the circulation and respiration thereby impeded. When seen for the second time he was in imminent danger of suffocation. The immediate change following aspiration—from a condition of dire distress to a state of comparative ease and comfort—was very striking. Had he consented to remain in the hospital at first he would, in all probability, have been treated by flying blisters and iodide of potassium, but the right plan would perhaps have been to tap at the very first. In another case, in which a similar condition was diagnosed in a young man, the chest was tapped by another medical man, and a good recovery resulted.

BOOTLE BOROUGH HOSPITAL.

COMPOUND COMMINUTED FRACTURE OF THE RIGHT LEG; SIMPLE FRACTURE OF THE LEFT LEG.

(Under the care of Dr. C. SWABY-SMITH.)

FOR the following notes we are indebted to Dr. Forbes, house-surgeon.

Stephen G——, aged forty, a labourer, was admitted on Nov. 4th, 1878, suffering from fracture of both legs. The accident happened through the patient's legs being between two colliding heaps of timber.

On admission he was very faint from shock and loss of blood. The fracture of the right leg was a compound comminuted one, that of the left leg a simple one, with extensive injury to the soft parts of both. The legs were put up in McIntyre's splints, and a mixture containing carbonate of ammonia was ordered, and for the first few days a diet consisting chiefly of beef-tea and milk.

On Nov. 7th the temperature was 102°. There was considerable pain and swelling, with purulent discharge. A lotion containing lead and carbolic acid was applied. On Nov. 10th the fracture of the left leg became compound, and extensive suppuration, reaching up into the thigh, followed. Sinuses formed in different parts of both legs. Owing to the McIntyre retaining the discharge, Lawrence's fracture-cradle was substituted. On Nov. 14th the man was put on ordinary diet, with milk and beef-tea, and a quarter of a grain of hydrochlorate of morphia nightly. Next day he became delirious. He having been addicted to drink, one ounce of brandy was given him daily, with marked benefit. The delirium continued up to the 25th, when the brandy was discontinued, and a pint of beer (daily) substituted. With a view to aiding union, Dr. Swaby-Smith prescribed a mixture containing phosphate of lime.

Early in December the discharge commenced to diminish, and the sinuses to close.

On Feb. 13th, 1879, he was sufficiently recovered to have gum-and-chalk bandages applied.

On the 20th a considerable portion of necrosed bone was removed. This was followed by erysipelatous inflammation of leg and thigh. Tincture of perchloride of iron was taken internally, and lead and opium lotion was applied.

After this the patient's improvement was uninterrupted, though tedious. Frequently small portions of necrosed bone were removed, or came away.

On April 10th he was discharged with a pair of very useful legs.

MEASLES, just now, is very prevalent in Birmingham, but, though the cases are very numerous, they are not of a very severe character. In the neighbouring village of Acocks Green there are many cases of diphtheria, some of which have already proved fatal.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Lymphadenoma.—Lympho-sarcoma of Mediastinum and Pericardium.—Rupture of Aortic Valve.—The Pathology of Morphœa.—Colotomy by a Parrot.—Cranial Osteophytes in Infantile Syphilis.

THE ordinary meeting of this Society was held on the 4th inst.; Mr. Hutchinson, President, in the chair. An interesting discussion upon the nature of lymphadenoma arose out of specimens shown by Drs. Taylor, Lediard, and Mr. Eve, and an important contribution to cutaneous pathology was made by Dr. Crocker in his paper upon morphœa. Dr. Crocker believes he has ascertained that the cause of this affection is a trophic change followed by thrombosis of the superficial vessels of the skin. He showed cases and microscopical preparations. A case of aortic valvular disease, apparently of traumatic origin, was brought forward by Dr. Greenhow, and several specimens were shown on the new plan "by card."

Dr. F. TAYLOR exhibited specimens from a case of Lymphadenoma. The patient, a boy ten years of age, came under care at the Evelina Hospital in May last, having been ill for six months, a glandular swelling in the right supraclavicular region being followed by enlargement of axillary glands, and of those on left side of neck. When admitted he was anæmic; the temperature was raised; the liver not enlarged, but there was dulness at the apex of the right lung. Signs of pleural effusion gradually appeared on the right side, for which paracentesis was performed. The glandular enlargement increased, the glands being firm, but movable. Death took place on September 29th. During the illness there was great fluctuation in temperature. There was no leucocytosis, and the amount of hæmoglobin in the blood was estimated at about 75 per cent. of the normal. The mediastinal and bronchial glands were found greatly enlarged, from the size of a pea to a small egg. There was much fluid in the right pleura, the lung partly adherent, with some lymphadenomatous nodules in the adhesions, and others in the parietal pleura. A few nodules occurred on the surface of the lungs; none in their substance. Other nodules also occurred in the liver, and the spleen was thickly studded with them. The mesenteric, axillary, and cervical glands were also enlarged; the glands on section having a uniform whitish character, not caseous. Microscopically the growths all presented the typical character of lymphadenoma. The case was of interest from the presence of growths in the pleuritic adhesions and from the absence of symptoms to be attributed to implication of the vagi nerves, which were quite surrounded by the enlarged glands.

Mr. FRED. EVE showed a specimen of Lympho-sarcoma of the Mediastinal Glands and Pericardium, from a man twenty years old, who first came under notice in April, 1878, having suffered from palpitation and pain after food for three months. There was dulness over the manubrium sterni and on each side of this for a short distance; manifest pulsation over precordia, as well as in the second and third left interspaces. Whilst in hospital he had an attack of phlebitis in the left leg. Discharged in July, he returned in October with marked prominence in upper part of chest, a laryngeal cough and paroxysmal dyspnœa, but the area of dulness had not extended. He died in December. A mass of new growth, white and brain-like, projected at the base of the heart, and infiltrated the whole pericardium, embracing the large vessels and extending along the pulmonary vessels. It did not compress the trachea, but involved the whole of the mediastinal glands. The only secondary growth was one in connexion with the xiphoid. The growth was composed of lymphoid corpuscles imbedded in the meshes of a gelatinous nature. Mr. Eve remarked upon the infiltration and thickening of the pericardium—a condition seen to a less extent in a case recorded by Dr. D. Powell (Path. Trans., vol. xxi.) In another case recorded by Dr. F. Taylor (vol. xxv.) the mediastinal growth invaded the pleura, as it had in the case Dr. Taylor had just related. Seeing how intimately the serous membranes were connected with lymphatic glands, it was not surprising to find extension of growth from the latter to the former. In a case of glioma (the structure of which closely resembles these lymphatic growths) he had found the growth to extend from the retina along the lymphatic channels around the optic nerve, and not in the substance of the nerve itself. He pointed out that these cases illustrated an original simple hyperplasia of lymphatic tissues taking on the features of malignancy in various degrees.

Dr. LEDIARD, who showed a specimen of Lymphoma of the Mediastinum "by card," said that in that case the growth had invaded the lung along the bronchi and vessels, the bronchus being almost occluded. The effects of such occlusion were shown in shrinking of the lung and retraction of the chest-wall, and an exploratory puncture (there were signs of effusion in the pleura) was followed by an in-rush of air into the pleural sac, and evidence of a slight amount of pneumothorax.

Mr. DORAN asked Mr. Eve for symptoms of the pressure in the vagi nerves. These nerves seemed to retain their functions in spite of much pressure, and he instanced a case in point. He had also often observed large masses of abdominal glands pressing on the nerves of the lumbo-sacral plexus where there had been no pain &c. produced during life.—Dr. POWELL asked whether in any of these cases there was evidence of any local irritation sufficient to start the process of glandular overgrowth. It would seem as if, so long as the hyperplasia was confined within the limits of the gland-capsule, no dissemination of the growth took place, but when it led to bursting of the capsule it then invaded other tissues as ordinary cancer does. He had recently seen a case of Hodgkin's disease, where one of the enlarged glands had apparently undergone this further change, and become fixed to the skin.—Mr. PARKER asked Dr. Taylor if the number of red corpuscles in the blood had been estimated in his case. A child now under his care came to him a year ago with enlarged cervical glands, which he removed. A further enlargement was followed by removal on two other occasions, but three months after the last operation the child returned in a pallid, cachectic condition, suffering from shortness of breath and enlargement of spleen, as well as renewed lymphatic glandular enlargement, but without any physical signs of mediastinal tumour. The red corpuscles were diminished to 1,200,000 per cubic mm., one-fourth the normal average; to this deficiency of the oxygen-carriers the breathlessness was probably due. There was no history of primary local irritation, as a starting-point for the enlargement of the cervical glands, and all those which he had removed were distinctly encapsuled.—The PRESIDENT inquired if there was any family history of a cancerous tendency in these cases, which were of interest as bearing on the evidence in favour of the view of the malignancy of lymphadenoma—a view originally held by Hodgkin himself. It would appear that lymphadenoma was the only instance of malignant action starting primarily in the lymphatic system.—Dr. TAYLOR, in reply, did not know of any cancerous taint in the family of his patient. The red corpuscles were not counted, but the child's anæmia was not excessive; nor was the dyspnœa marked until the supervention of the pleural effusion. As to a local origin for the glandular enlargement, there was a history of slight otorrhœa following whooping-cough and measles at the age of four or five; but the first gland noticed to be enlarged was seated low down by the clavicle. He was not sure that in the case he had published previously, referred to by Mr. Eve, the pleural growths were continuous with the mediastinal.—Mr. RIVINGTON asked if the secondary growths in these cases were limited to the areas whence the affected glands drew their lymph supply. It would be of interest to define strictly the lymphatic areas in this connexion. — Mr. EVE said that there was paroxysmal dyspnœa in his case, attributable to compression of the vagi nerves. The form of disease (primarily mediastinal) he had shown appeared to originate in older subjects than lymphadenoma, arising elsewhere; and this had been explained on the view, that in them the tendency to bronchial catarrh was more frequent. The cervical glands in his case were only affected by extension.

Dr. GREENHOW exhibited a Heart, showing both obstruction and incompetency of the aortic valves, which he believed had arisen from a strain. The patient, a temperate man, aged thirty-nine years, previously of good health, whilst lift-

ing a heavy weight, had felt as though something had given way "in his inside" accompanied by a severe pain through the body. At the end of some weeks he began to suffer from palpitation and shortness of breath on exertion, and somewhat later from œdema of the lower limbs and orthopnœa. On admission into the hospital, loud systolic and long diastolic murmurs were heard in the aortic region. He gradually became worse and died in September, about five months after the injury. At the post-mortem examination the right and middle cusps of the aortic valves were found to be fused together, and a semi-calcified vegetation hung loosely into the ventricle. A V-shaped notch was found near the middle of the posterior cusp of the valve, without any surrounding thickening or vegetation; and the left cusp was eroded, and presented a jagged, irregular margin. There was also an ulcer of the endocardium on the septum ventriculorum. Dr. Greenhow was of opinion, founded partly on the history of the case, partly on the absence of any evidence of endocarditis elsewhere than on the right and perhaps middle cusps of the aortic valves, that some injury had been sustained by the former of these cusps at the time of the strain; that this gave rise to the adhesion of the right and middle cusps and to the formation of the pendulous vegetation on the right cusp. The late development of the dropsy and other prominent symptoms of cardiac disease were, he believed, due to the fact that the incompetency of the valves had resulted mainly from the erosion of the healthy cusps by the pendulous vegetation, to which also he attributed the ulceration of the ventricular septum.

Dr. CROCKER read a paper upon the Pathology and Histology of Morphœa, illustrated by several patients, and by a large series of microscopical preparations. Hitherto authorities had differed as to the nature of morphœa, some regarding it as due to hypertrophic, others to atrophic, changes, and others to lardaceous deposit. Dr. Fagge, in Guy's Hospital Reports for 1867 and 1869, had pointed out its association with scleroderma; and Mr. Hutchinson had proposed to call both forms of disease by one name. The two cases from which he had examined the skin had been under his care for two years. In one the affection was symmetrical; in the other a single patch occurred on the nape of the neck. He had examined the patches in their early stage, when they were mere whitish spots, with the following result:—In the epidermis very little change, except partial disintegration of its deeper layers. Atrophy of papillary layer. Thrombosis of the longitudinal vessels in the superficial plexus. Abundant cell-infiltration around sebaceous glands and hair-follicles, and around the vessels. Then in later stages the development of these cells into fibrillar tissue, its contraction, and consequent obliteration of bloodvessels, and atrophy of sebaceous and sweat-glands. (That the function of sweat-glands was in abeyance in the patches was proved by the injection of pilocarpine in a subject of morphœa; all the surface of the body with the exception of the morphœa-patches became bathed in sweat.) No lardaceous change. Some of the vessels showed evidence of rupture. These facts accorded with the appearances of the patches to the naked eye. The primary pearly-white spots represented the base of a cone of which the blood-supply was cut off by thrombosis. The spot was surrounded by a zone of dilated vessels due to hyperæmia, often leading to marked pigmentation. One case under the late Dr. Tilbury Fox showed ulceration of these patches. As the changes proceed the patch gets thicker from the cell-infiltration, and whiter, then is marked by radiating folds, and becomes thinner from the formation of the fibrillar tissue. Contrasting this with scleroderma, Dr. Crocker believed that there also the cutaneous change was of like nature, that it was also due to blocking of vessels, but of vessels in the deeper layers of the skin, ending in increased production of compact fibrous tissue in the chorion, and subcutaneous fatty tissue, together with atrophy of vessels. Mr. Wilson and Mr. Hutchinson had pointed out the frequent occurrence of morphœa in the course of nerve tracts, but the diffuse form did not conform to this distribution, and he would regard the vascular changes as the primary feature. The frequent association of scleroderma with acute rheumatism, &c. pointed to some blood-change favouring coagulation, and he compared the production of scleroderma to that of phlegmasia dolens when the whole limb suffers from impeded circulation. On these views morphœa being only a circumscribed and superficial form of scleroderma, he would suggest that the two affections be styled respectively "circumscribed" and "diffused" scleroderma.—Dr. T. C. FOX said that it was interesting to find the identity of the processes in morphœa and scleroderma thus proved. It was necessary to insist on the fact that sometimes there was an overgrowth of tissue, and in others an atrophy—for some cases, especially of scleroderma, were atrophic from the first, and Mr. Wilson had distinguished between the two forms. The neurotic origin of morphœa had been long ago pointed out by Mr. Wilson; and lately, in a discussion at a Paris Society, the general opinion was that scleroderma was due to trophic neurosis; and the same view had been recently urged by Dr. John Harley. As bearing on its neurotic origin, it was interesting to find morphœa sometimes associated with intense pigmentation of skin. Mr. Gaskoin had recorded one case where this condition was very marked; and Dr. Fox had now a similar case under his care, where intensely black patches were present on the skin. This was interesting, from the allied pigmentation of Addison's disease being probably due also to sympathetic neurosis.—The PRESIDENT had fully discussed the neurotic theory in his lectures at the College of Surgeons, and had contrasted morphœa with herpes zoster. In herpes the distribution of the vesicles was that of the sensory nerves; in morphœa, it seemed rather to follow the course of vessels, and therefore to be in the track of the vaso-motor nerves. He had compared the morphœa patch to the condition of "dead-fingers," and considered the analogy to be a correct one. He had also attributed the tendency of the patch to contraction of new-formed tissue, and had surmised that at one stage there is probably exudation in the sheaths of the vessels. Dr. Crocker's researches confirmed from anatomical examination the conjectures framed from clinical observation. A theory limiting the origin of scleroderma to vascular change could hardly explain these cases—as exemplified in a case under his own care and in one under Dr. Crocker's, where the scleroderma was limited by an abrupt line to the upper limbs and upper half of the trunk. Such could not be explained except on a neurotic hypothesis. The cases often showed other evidence of vaso-motor disturbance—e.g., in one the fingers would flush up.—Dr. CROCKER, in reply, said that the hypertrophic stage was that where the cell-exudation occurred, and the atrophic stage was due to the cutting off of the blood-supply. The views he had stated would explain the occurrence of œdema in some cases. He would admit that there was much in favour of a sympathetic nerve origin, preceding possibly the vascular changes. The case of general scleroderma he exhibited at the Clinical Society last year, where all the skin was hardened, had now perfectly recovered.

Mr. J. WOOD showed the Colon of a Sheep in which Colotomy had been performed by a Parrot. The specimen, together with a specimen of the bird, had been sent to him for exhibition at the Society by Mr. Delacour, of Otago, New Zealand. The parrot is the Ka-ka (*Nestor notabilis*), which abounds on high ground in the neighbourhood of Otago. Its ordinary food consists of berries and insects; but it appears to have acquired a taste for raw flesh, for it attacks living sheep, tearing out the wool, and picking the flesh. When the sheep are assembled wounds resulting from this treatment are often found on them, and not unfrequently they present an artificial anus in the right loin. The specimen was from a sheep that had been so attacked. It consisted of the lumbar vertebræ and the colon, showing the artificial anus, between the iliac crest and the last rib on the right side; there was contraction of the gut below, and hypertrophy above the wound. The sheep was much wasted. The *modus operandi* appeared to be as follows:—The birds, which are very bold, single out the strongest sheep in the flock. One bird, settling on the sacrum, tears off the wool with its beak, and eats into the flesh till the sheep falls from exhaustion and loss of blood. Sometimes the wound penetrates to the colon; it may be on the left, but more frequently on the right side. Whether the birds attack dead sheep is doubtful. Professor Flower had suggested that the bird had in view the object of getting at the contents of the colon, but it seemed more probable that it was really due to its acquired carnivorous habits, that it wounded the sheep, and the loin especially, owing to the position it took upon the sheep's back.—The PRESIDENT said they were much obliged to Mr. Delacour for his communication.

Dr. LEES exhibited a recent specimen of a Calvaria of an Infant, showing the early stage of Syphilitic Lesion as described by M. Parrot. The child was nine months old, and the skull presented slightly raised vascular unsym-

metrical prominences on the frontal and parietal bones. The pericranium was readily stripped off, but the dura mater was more adherent to the parts corresponding to this change than to other parts of the calvaria. There was marked asymmetry of the skull, the right frontal region projecting in front, and the left occipital behind, a change in shape more marked in older skulls affected with this condition. The specimen also showed two spots of craniotabes on the posterior part of the parietals. The child was a twin, and was brought to Ormond-street Hospital a week ago with a large liver and spleen, when the craniotabes was detected. The only history pointing to syphilis rested on the occurrence of some rash about the genitals when a week old, and the fact that its father was a soldier. Dr. Lees, however, expressed his opinion that the more cases he saw the more he was convinced as to the syphilitic nature of this cranial lesion. In answer to the President, he added that the other twin also presented a large spleen and liver, and had craniotabes.—Dr. CROCKER had recently examined the body of a child who died from meningitis of the anterior and upper surface of the brain. Its skull presented well-marked craniotabes, and, as there was no tubercle anywhere, he inferred that probably it was a case of syphilis, although the history of the case was defective.

Specimens without oral communication.

1. Chronic Enlargement of Bursa Patella. By Mr. Hutchinson.
2. Large Recurrent Enchondroma of Upper Jaw. By Mr. Hutchinson.
3. A Pigmental Mole, with Elephantoid Hypertrophy of Mons and Labium. By Mr. Hutchinson.
4. Osteitis of the Os calcis (recent). By Mr. Rivington.
5. Lymphoma of Mediastinum pressing upon the right Bronchus and invading the Lung. By Dr. Lediard.
6. Medullary Cancer of Duodenum occluding and invading the Hepatic Ducts. By Dr. Coupland.
7. Hernia of Small Intestine through a Rent in the Omentum. By Dr. Coupland.
8. Volvulus of Ileum determined by a Meckel's diverticulum passing completely to the Umbilicus. By Dr. Coupland.

MEDICAL SOCIETY OF LONDON.

Mortality among Rich and Poor.

The ordinary meeting of this Society was held on the 3rd inst., Dr. Cockle, President, in the chair. Twelve new Fellows were elected.

Dr. C. R. DRYSDALE read a paper upon "The Mortality of Rich and Poor." The main argument put forward in this paper was that it was out of the question to expect much from the popular schemes of drainage and cleansing of towns towards lowering the death-rate in this country, so long as indigence remained so very common a feature of society. The death-rate of England and Wales, for instance, as Dr. Fergus had remarked at Cork in August last, had remained stationary for the three decades ending in 1871, and the same fact held good for the mortality of London, which usually was about an average of that of England and Wales. A general death-rate gave a most misleading idea, as remarked by Mr. Edwin Chadwick, of the healthiness of particular sections of society. Thus there were large quarters of wealthy persons living in high-rented houses, where the death-rate did not much exceed 11 per 1000; whereas, in London even, there were said to be localities where, from year to year the mortality was as high as 50 per 1000. The death-rate for the families of the rich in London had been compared with that of the poor, in 1843, by the Sanitary Commission charged with that inquiry, and it was estimated by that report that, whilst the mean lifetime of the richer classes in London was 44 years, that of the poorer classes was about 22. The same thing had been found in Paris, where the death-rate among men over forty and under forty-five was found to be 8·3 per 1000, when in easy circumstances; and 18·7 per 1000 when in the poorer classes. Between 1817 and 1836 1 inhabitant in 15 died in the 12th arrondissement of Paris, peopled by the poor; as against 1 in 65 in the second arrondissement or rich quarters. Still more recent statistics of a London assurance office (C. Ansell) showed that whilst the death-rate in the first years of life among the gentry, nobility, and professionalists was 80 per 1000; this rose to 150, 188, and even to 330 and 500 per 1000 in Liverpool; in the slums of Manchester and Glasgow, and of Berlin (Stillé.) It had been calculated that 142,000 persons in England and Wales alone died yearly, who would have survived had their circumstances been as easy as those of the classes in Ansell's inquiry; or if they had lived where butcher-meat and wheat were as cheap as in New Zealand—i.e., 3*d*. a pound and 3*s*. a bushel. The death-rate in New Zealand, in spite of a prodigious birth-rate, was only 12 per 1000. The birth-rate in this country, 36 per 1000, was far too high; and it was this that pressed on the powers of agriculture and the power of getting food. His conclusion was that, until this question was attended to by hygienic congresses and by governments, it would be vain to hope for a higher standard of health among the artisan classes. The aim ought to be to make beef and wheat as cheap here as in a new colony.—Dr. ROUTH, admitting the accuracy of the author's statistics, could not agree that the high rate of mortality among the working classes was due to their poverty, but rather to their ignorance, intemperance, and improvidence, as well as their unhealthy surroundings. If the rich were as careless and improvident as the poor the mortality among them would be quite as high. The low death-rate of New Zealand was due as much to the salubrity of the climate and greater temperance as to the prosperous condition of the working-classes. He was opposed to any measure for diminishing poverty by the limitation of the number of children in any family, pointing out that the Registrar-General considered an increasing number of births to denote an increasing prosperity of the country. At the same time where there is poverty there must be disease, and in this country poverty is chiefly due to improvidence.—Dr. PARAMORE held that the prevention of childbirth as a means of lessening poverty should not be entertained; and insisted that intemperance was the cause of all the misery among the poor.—Dr. CRISP also did not think poverty was the cause of the great mortality among the poor, but that it was due to their intemperance and bad surroundings. The agricultural labourer lives long on very scanty fare, but his habits are more temperate, and he lives in a purer air than the working-classes in our towns.—Dr. HEYWOOD SMITH attributed infant mortality among the poor to the unavoidable exposure of the youngest child, to all weathers. He advocated emigration as the best means to diminish the poverty of this country.—Dr. DE HAVILLAND HALL pointed out that emigration deprived the country of the strong and healthy, leaving the sickly and weak behind—Dr. WOAKES thought poverty to be the real cause of high mortality.—Mr. GOULD did not think either wealth or poverty *per se* to be the cause of high mortality; the want of good clothing, healthy dwellings, and care have a good deal to do with the high death-rate.—Dr. ROGERS held that drink was the cause of the poverty and high mortality among the poor.—Dr. DRYSDALE, in reply, maintained that children born of well-to-do parents would live to fifty-five, while those born of poor parents would only live to thirty-five. Wealth also gave the advantage of education—the power of avoiding disease and hastening its cure. He had contrasted the poor of large towns with the rich of large towns, and had not compared them with agricultural labourers. Large families without food did not mean happiness. Emigration would not meet the difficulty, for it would entail the annual exodus of twelve and a half millions of the European population to prevent the increase in the present number of inhabitants. In France the birth-rate is the lowest of any country in Europe, but it has the highest percentage of people over sixty years of age.

METROPOLITAN DISTRICT ASYLUMS BOARD.—At the meeting of the Metropolitan District Asylums Board, on the 1st inst., a report was presented respecting small-pox, showing that during the fortnight there had been a further diminution of the disease. On Friday the number of patients in the hospitals was 38. The fever cases showed an increase of two. A discussion arose on a communication from the steward of Homerton Hospital that a certain contractor had offered him gratuities. A motion to annul the contract was made, but a final decision was postponed to give the contractor an opportunity of appearing before the Board and making a statement on the subject.

Reviews and Notices of Books.

A Manual and Atlas of Medical Ophthalmology. By W. R. GOWERS, M.D., F.R.C.P., Assistant Professor of Clinical Medicine in University College, &c. London: J. & A. Churchill. 1879.

THE influence that Helmholtz's invention of the ophthalmoscope has had on clinical medicine is exceeded only by that on ophthalmology proper. Indeed, of those who have used it, practical physicians have usually been more emphatic than ophthalmic surgeons in their praises of this instrument. This is especially true of those physicians who have employed the ophthalmoscope in the investigations of intracranial diseases. Lectures have been delivered, pamphlets have been printed, books big and little have been composed or compiled, and pictures more or less attractive have been drawn or invented, in order to prove to us that by certain changes in the ocular aspect of the optic nerve, or in the tissues lying in the fundus of the eye, we may define not only the existence of abnormal encephalic phenomena, but their nature and seat likewise. Much of this has exploded as fanciful and exaggerated. But just in proportion as the estimate of the powers of the ophthalmoscope has grown more and more reasonable, so has its real value increased. No sensible person would now expect from the mere presence of œdema or inflammation of the optic papilla to define the precise nature and situation of morbid changes within the cranium, any more than he would pretend to diagnose the exact nature and seat of pelvic or abdominal disease from the presence of œdema or of varicose veins of the legs. It is no small help in a case of suspected cerebral or spinal disease to be able to adduce the corroborative evidence which the ophthalmoscope sometimes affords. We must for the present rest content with this and be thankful; to seek for more is to display the most fatal of all weaknesses—the weakness of scientific credulity.

And here let us, if possible, get rid of the prevailing fallacy that the ophthalmoscope is only or mostly useful for the elucidation of diseases of the nervous system. The truth is far otherwise. The physician whose lines are thrown almost exclusively among patients afflicted with diseases of the nervous system will, if he adopt the routine use of the ophthalmoscope, find in a larger or smaller number of his cases intraocular appearances associated with pathological conditions somewhere in the nervous centres. But this does not represent the whole truth. What, for instance, does the ophthalmic surgeon's experience teach? Not, we venture to affirm, that these ophthalmoscopic appearances are always and necessarily significant of disease in the brain or the spinal cord, but rather of some constitutional state. These two different phases of ophthalmoscopy are too often forgotten, or they are confounded. It follows as a matter of course that if a physician be chiefly consulted for maladies of the nervous system, the majority of the cases of optic neuritis that he meets with will be associated with those diseases. The general physician, too, may get a fair sprinkling of such cases. But the ophthalmic surgeon, on the other hand, who, after all, sees the great majority of the cases of inflammation of the optic papilla, can tell a different story. He is consulted because the sight has failed, and with this there may or may not be any other sign of general or local disease. The consequence is that a very large proportion of the cases of optic neuritis that he encounters are unaccompanied by any appreciable sign of disease of the nervous system. And this, be it remembered, not because the ophthalmic surgeon is not alive to the possibility of the existence of such disease, or incapable of recognising it when it is present, but because it does not exist. He is, however, often, perhaps generally, led to inquire into the constitutional state, and not unfrequently he discovers renal, uterine, or hepatic disease, or gout, rheumatism, tuberculosis, or other grave constitutional maladies. Not only is this so, but he is often the first to detect the existence of such disease, hitherto unsuspected. A single glance with the ophthalmoscope may not seldom convince the ophthalmic surgeon of the existence of albuminuria, diabetes, or heart disease, just as much as if he had taken part in the physician's delicate chemical tests and elaborate auscultation. If these facts be borne in mind, the ophthalmoscope will soon take its proper place among the mechanical aids to diagnosis, and we shall break through the narrow boundary in which some of its advocates have enclosed it. The ophthalmoscope is indispensable to the ophthalmic surgeon, but it is almost as useful to the general physician, and especially to the general practitioner, as the stethoscope or the test-tube, and is easier to use than either of these. Despite self-interested protestations to the contrary, we are prepared to maintain that, after the laryngoscope, the ophthalmoscope is one of the easiest to use of all the scientific apparatus employed in the investigation of morbid phenomena.

We are glad to find that Dr. Gowers has, notwithstanding great temptations, avoided much of the absurd exaggeration of some, especially continental, writers on medical ophthalmoscopy, and has given a fair share of attention to ophthalmoscopic changes in special diseases not connected with the nervous system. For example, of 115 pages of description and explanation of these changes, only 51 are given up to those that accompany diseases and injuries of the brain and spinal cord, the remainder being devoted to ophthalmoscopic changes associated with diseases of the urinary, circulatory, and respiratory systems; of the blood; of the digestive and sexual organs; of the skin; of general chronic diseases, as syphilis, rheumatism, gout, alcoholism; and, lastly, of acute general diseases, as typhus, typhoid, relapsing, and scarlet fever, measles, small-pox, erysipelas, pyæmia, &c.

Dr. Gowers states that his first intention in preparing this work was the publication of a series of illustrations of medical ophthalmoscopy, and of the cases from which they were made. On fuller consideration he decided to write a systematic account of the subject which the drawings illustrate. There are altogether sixteen plates, twelve giving the ophthalmoscopic appearances of inflammation of the optic nerve or of the fundus of the eye, and three of the microscopical appearances of optic neuritis. Of the ophthalmoscopic plates, two are chromo-lithographs, the remainder autotype reproductions of sepia drawings. Although some persons may think the coloured plates make the prettier pictures, the autotype plates give the more faithful representations of the various pathological changes they are intended to illustrate.

The work is divided into two parts, the first dealing with the changes in the retinal vessels, optic nerve &c., of general medical significance; the second with ophthalmoscopic changes in special diseases. Besides these two parts, however, there is a short general introduction, and three appendices. The first appendix is on ophthalmoscopes, on learning the use of the ophthalmoscope, on ophthalmoscopic micrometry, and on the examination of colour-vision; the second appendix is made up of a set of test-types; and the third contains the records of fifty-one cases of cerebral, spinal, renal, or other diseases accompanied with changes in the eye. The description of the plates takes up about 25 additional pages. In all there are 352 pages.

As might be anticipated, the plates and the records of the cases are the most original portions of the work, as they are, likewise, the most valuable. The skill to execute ophthalmoscopic drawings worth preserving is so rare, and the enormous expenditure of time required for their proper exe-

cution so seldom available, that future writers will doubtless be content to make use of Dr. Gowers' patience and industry by referring to his plates, which are as faithful as they are elegant, instead of wasting their time in producing imitations anew.

It is not possible to speak in terms of equal approbation of other portions of the work. There are not a few signs of hurry. Many passages are not free from obscurity, and this is culpable because Dr. Gowers has afforded us sufficient proof that he can write clearly and compactly and well. When a second edition is called for, as doubtless it will be, we shall be glad to find that these minor faults are removed by a recasting of the systematic portions of the work.

Water for Nothing. Every House its own Water-supply. By SHIRLEY HIBBERD, Esq., F.R.H.S. London: Effingham Wilson. 1879.

MR. HIBBERD proposes, as many have proposed before, that the rain-water which falls on the roofs of houses shall be stored and used, after filtration, for drinking purposes. The obvious objection, that the washings of a town, or even a country, house are by no means pure water, but a dirty infusion of soot, dead leaves, and the droppings of birds, is met fairly by Mr. Hibberd, who points out that mechanical contrivances exist. He instances Buck's patent percolator, by which the rain which falls in the first period of a shower—say the first fifteen minutes—is allowed to run away, or is stored separately for garden use. The roof, once well washed, becomes a good gathering-ground; and if the water were kept loosely covered, in as cool a place as possible, it would no doubt be good. Certainly it would be very much better than much of the water now used for domestic purposes; and the system advocated by Mr. Hibberd might be adopted with advantage in a large number of cases, and might in many a detached house or small village afford a solution of the difficult water-question.

But while we agree with much that Mr. Hibberd urges, and commend his pamphlet very heartily to sanitarians, we are compelled to point out that in some respects he overstates and even misstates his case. The rain water of towns is by no means pure, even when caught before it touches the earth; and Dr. Angus Smith has shown that in Manchester it is little better than a weak and dirty solution of sulphuric acid. On the other hand, the evils, such as goitre and urinary calculus, which Mr. Hibberd asserts are, "beyond dispute," due to the mineral salts of hard water, have never been traced to such a source, and are quite unlikely to arise from it. The quantity of lime and magnesia salts consumed in the food we eat is immensely greater than could be obtained from any water used for drinking purposes. It must, moreover, be remembered that soft water acts strongly on lead, and that if Mr. Hibberd's suggestions were adopted it would be necessary to avoid altogether the use of lead pipes or tanks in houses. Finally, we must point out that tolerably frequent cleaning of the tanks and filters would be imperatively necessary.

Report of the Chemical Analyser to Government, Bombay, for the year 1878-79. Bombay: Government Central Press.

SURGEON-MAJOR LYON, the Chemical Analyser to the Bombay Government, gives in this report the results obtained from 1473 analyses made within the year. Many of those results are of interest, not only for India, but also in England, and we must congratulate the Government on the valuable knowledge they have acquired. The exceeding badness of much of the water used for drinking purposes is again pointed out, and we are glad to observe that some immediate action is proposed. Great impurity was also observed in the water obtained by melting some artificially-prepared ice, and the fact serves to remind us of the care required in choosing the water for ice-machines. It is a common fallacy to suppose that clear ice must always consist of pure water. Another interesting observation relates to the storing of water for ships' use. The analyst found that good water would keep well in a teak-wood tank that had been charred inside, but became rapidly offensive in an uncharred tank which had been caulked inside with cotton and other matters. The details of the medico-legal inquiries made during the year are also of much interest.

HEALTH OF LARGE ENGLISH TOWNS.

FORTY-FOURTH WEEK OF 1879.

IN twenty of the largest English towns, containing nearly a third of the entire population of England and Wales, 5450 births and 3103 deaths were registered in the week ending last Saturday. The births exceeded by 268, while the deaths were 267 below, the average weekly numbers during 1878. The deaths showed a decline of 25 from the increasing numbers in recent weeks; and the annual death-rate, which had been equal to 19·5, 20·9, and 22·1 in the three preceding weeks, was last week 21·9. During the past five weeks of the current quarter the death-rate in the twenty towns has averaged 20·9 per 1000, against 21·6 and 21·3 in the corresponding periods of 1877 and 1878. The lowest death-rate in the several towns last week were 13·9 in Portsmouth, 15·4 in Plymouth, 16·4 in Oldham, and 16·7 in Wolverhampton. The rates in the other towns ranged upwards to 23·9 in Sheffield, 24·4 in Leeds, 24·7 in Manchester, and 25·8 in Liverpool. The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 468 and 475 in the two previous weeks, declined last week to 442; 154 resulted from scarlet fever, 79 from measles, 77 from diarrhœa, 58 from whooping-cough, and 49 from fever. The annual death-rate from these seven diseases averaged 3·1 per 1000 in the twenty towns, and ranged from 0·0 in Portsmouth and Plymouth to 5·2 in Liverpool and 5·3 both in Sheffield and Newcastle-upon-Tyne. The fatal cases of scarlet fever in the twenty towns, which had steadily increased from 94 to 166 in the seven preceding weeks, declined to 154 last week, and were 46 less than the number returned in the corresponding week of last year; this disease showed the largest proportional fatality last week in Sunderland, Bradford, Liverpool, and Newcastle-upon-Tyne. The deaths from measles were most numerous in Liverpool and Sheffield. No less than 15 of the 24 deaths referred to diphtheria occurred in London; 3 were also returned in Birmingham, and 2 in Liverpool. Fever, principally enteric, was also more fatal in London than in the provincial towns; the 49 deaths from this disease included 32 in London and 5 in Liverpool. Small-pox caused two more deaths in London and its outer ring of suburban districts, but not one in any of the nineteen large provincial towns. The Metropolitan Asylum Hospitals contained 37 small-pox patients on Saturday last, 7 being new cases admitted during the week.

The deaths referred to diseases of the respiratory organs in London, which had been 190, 318, and 396 in the three preceding weeks, further rose to 402 last week, and exceeded the corrected average number in the corresponding week of the last ten years by 50.

MR. WILLIAM THOMAS, M.R.C.S., Surgeon to the Children's Hospital, Birmingham, and Professor of Anatomy to the Queen's College, has been elected President of the Midland Medical Society. The inaugural meeting of the session was held on the 3rd inst. at the Grand Hotel, and the usual yearly address was delivered by Sir William Jenner, his subject being, "The Treatment of Typhoid Fever." The attendance was very large, nearly all the practitioners of the town and district being present. Sir William Jenner was afterwards entertained at supper by the members of the Society.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 8, 1879.

IT is a hopeful sign when an old corporation like the Royal College of Surgeons can, through its Council, sit down calmly to discuss propositions that are intended to cut at the root of its most cherished traditions. During the past ten years, the College has had both its temper and its adaptability to the exigencies of modern times severely tried, and though at times disposed to turn obstinate, it has come out of the ordeal well enough. Its sacrifices to the Conjoint Scheme, for instance, were, in the end, made with a liberality and a decision that surprised those most who professed to have the best acquaintance with its spirit and its polity. There is hardly one of its powers or privileges that in one form or another the Council has not been requested to relinquish. The long and bitter wranglings about the appointment of examiners, and the apportioning of the payments under the (chimerical) Conjoint Scheme, can scarcely yet have been effaced from the memories of our readers. The attempts to fix the chief charge of the maintenance of the Museum on the funds of the College, and at the same time to distribute the advantages and emoluments that might in any way arise therefrom indiscriminately among those who have not used what opportunities they might have possessed of becoming members of the College and those who have, are neither new nor seldom. The strange proposal to throw the examinerships in anatomy and physiology open to any and every teacher, whether a member of the College or not, and indeed whether a member of the medical profession or not, is only one of the latest phases of this sweeping radicalism.

It may be remembered that two years ago, and again three weeks ago, Mr. SIMON brought a motion before the Council to rescind the rule that restricts the appointment of examiners in anatomy and physiology to persons who are Fellows of the College. The proposal was seemingly fair, and only a closer look revealed the deeper, hidden meaning. It was innocently imagined that this was a praiseworthy attempt to render Members of the College eligible for these examinerships as well as Fellows. So far it was good, and seemed deserving of support, but it was soon discovered that the proposal was capable of bearing quite a different construction. It was one thing to remove the restriction from Members of the College, and another to lay the examinerships in anatomy and physiology open to any person who could obtain proper recognition as a lecturer or teacher. Accordingly, Mr. SIMON was on both occasions left in a small minority. Indeed, the last time he brought his motion forward it barely escaped the humiliation of failing to obtain a seconder. When Mr. GAY did rise to second it, he did so in a half-hearted way, and was, we believe, more eager to raise the question of the desirability of removing the disabilities which are placed upon the Members of the College than to secure the adoption of Mr. SIMON'S motion.

We confess to a total inability to discover the clue to Mr. SIMON'S action. It cannot be an ultra-liberal impulse that has seized him; his conduct is too deliberate. Has he conceived the idea that the College is unable to discover among its 1233 Fellows and its 15,832 Members *nine* persons competent to examine candidates for the diploma of Fellow or Member in the subjects of anatomy and physiology? His use of an argument based on some statistics showing the number of Fellows teaching anatomy and physiology in the medical schools of England lends support to this conjecture. Mr. SIMON is stated to have said that of forty teachers of Physiology in England only nine are Fellows of the College. We cannot of course vouch for the accuracy of this report; the circumstances under which the meetings of the Council of the College are held prevent that. And as we may have been incorrectly informed, we have preferred to make an independent examination of the figures. In doing so, we have purposely left out of our calculations the minor and temporary officers, such as demonstrators and assistant-demonstrators of anatomy and physiology, and have reckoned only the recognised and permanent teachers.

In England proper there are (excluding always the Medical School for Women) nineteen medical schools, eleven of which are located in London. Attached to these schools are twenty-three lecturers or teachers of anatomy, and twenty-four of physiology. Of the twenty-four teachers of physiology, seven, or 29·16 per cent., are Fellows of the College, and of these five are attached to metropolitan schools, the sixth is at Birmingham, and the seventh at Leeds. In other words, of the twelve teachers of physiology at the eleven metropolitan schools (and it is from these schools only that the examiners can, as a rule, be obtained), five, or nearly 42 per cent., are Fellows of the College. This is a ready answer to any plea for such a proposal as Mr. SIMON'S that may be based on statistics. The answer becomes complete when it is stated that only one of these five gentlemen has at present a seat on the Board of Examiners, and he has not been there twelve months.

If this large proportion of Fellows of the College among the teachers of physiology has been bred under the *régime* that came to an end but five years ago, what may be expected when the Fellows of the College have enjoyed for ten or twelve years the substantial encouragement of lucrative prospective examinerships? The argument is still stronger in the case of anatomy. Of the twenty-three teachers of anatomy, thirteen, or 56·5 per cent., are Fellows of the College, and of these nine are attached to the metropolitan schools, the tenth is at Birmingham, the eleventh at Bristol, the twelfth at Cambridge, and the thirteenth at Liverpool.

These figures do not, however, show the whole of the influence that the College has exercised and does still exercise on the study of anatomy and of physiology in this country. What remains behind we wish to adduce as an argument for amending the rule relating to the appointment of examiners in anatomy and physiology, so as to make Members eligible as well as Fellows.

We have already stated the number of Fellows of the College who are at the present time recognised teachers of anatomy and physiology respectively in the English medical schools. Together they show that out of the forty-seven teachers of these two subjects, twenty, or 42·5 per cent., are Fellows. But, as we just said, the influence of the College

does not end here. After deducting the thirteen Fellows from the twenty-three teachers of anatomy, there are ten teachers to be accounted for. Of these, no less than nine are Members of the College; and out of the seventeen teachers of physiology that remain after deducting the seven Fellows of the College, eleven possess the diploma of Member. Taking both sets of figures together, it will be found, of twenty-three teachers of anatomy in the English schools, twenty-two are Fellows or Members of the College, the unique exception being the Professor of Anatomy at Owens College, Manchester, who is Doctor of Medicine of the University of Edinburgh; and that of the twenty-four teachers of physiology, eighteen, or 75 per cent., are Fellows or Members of the College. Of the six exceptions, only one received his professional education in a London school, and he is a Doctor of Medicine of the University of London. Three of the remaining five are graduates of the University of Edinburgh, one of the University of Dublin, and one of the University of Aberdeen. So that of the total number of recognised teachers of anatomy and physiology attached to the medical schools of England, 85 per cent. are Fellows or Members of the English College of Surgeons.

These statistics tell against Mr. SIMON'S position, whether he take his stand on the ground of necessity or of expediency. In the face of this evidence, it does not seem necessary for the Council to go beyond the constituents of the College for its examiners either in anatomy or physiology, and it is scarcely reasonable to ask that it should. It is, however, lawful to ask the Council to consider the propriety of permanently withholding the examinerships in anatomy and physiology from the Members of the College. We need not say that we are in favour of removing the disability. We know of no argument that can justify the maintenance of the rule that restricts these examinerships to Fellows. No sane man would for a moment dream of asking for the abrogation of the charter that secures the examinership in Surgery to the Fellows. But no charter is needed for any alteration in the regulations relating to the Board in anatomy and physiology. The Council possesses full and complete power over the Board, and can make what regulations it pleases respecting its nature and constitution, as well as the qualification and mode of appointment of its members. It rests, therefore, with the Council to say whether the rule that excludes Members of the College shall be continued or not, and if so, for how long.

IT is one thing to increase the number of beds in a hospital, and thus extend the area of its operations as a philanthropic agency, but another and, from our standpoint, a higher form of enterprise, to enhance its efficiency as a centre and instrument of scientific work and progress. If the *vis à tergo* of mere extension be the need of the sick poor, a *vis à fronte* which reacts on the aggregate of that need is undoubtedly created by the measures taken to meet it. In other words, the demand is sure to keep pace with the supply. We do not make this remark cynically, but with a view to place on record the satisfaction with which we observe that recent enterprise in connexion with hospital-building has boldly assumed a more rational form and purpose than characterised much of the effort previously put forth, professedly in the same direction. It is gratifying to note that presidents, treasurers, and the public, are beginning to recognise other ends to be gained by institutions for the accommodation and relief of the diseased and poverty-stricken than the multiplication of objects of charity or the provision of additional comforts for the patients received.

There are, we cannot fail to see, tokens of a better spirit and more enlightened policy than once prevailed with respect to those scientific purposes which the medical profession is bound to keep steadily in view while it ministers humanely and considerately to the wants of a class which society is entitled to regard as composed of *beneficiaires*, but Science must always look upon as "cases." It is useless, and we cannot think it is wise, to assume that the interest practitioners of medicine and surgery take in the sick poor is solely or in a primary sense benevolent. Medical men are as warm-hearted and generous as the members of any other profession, but it is not expected or believed that lawyers are impelled by motives of pure philanthropy when they devote pains and skill to the vindication of right in regard to property. Life is of higher value than property, and the professors of medicine may claim to rank next to those who assume the cure of souls — albeit we think the two vocations, with their respective objects, should be kept rigorously apart and distinct; but it is unreasonable not to perceive that the Science we serve has the first hold on our sympathies, and as medical men our function in the wards of a hospital, and at the bedside of the sick, wherever they may be located, and whatever may be their condition, is essentially practical, with a view to the investigation and the treatment of disease. It follows that while we share the pleasure which accrues to any and every good work done in aid of humanity, the medical profession must feel especially keen interest in hospital enterprise, which consists not merely in extension but in progress; that is what we call progress, the recognition of scientific claims, and the satisfaction of scientific necessities. In proportion as the recent alterations and additions made at hospitals in London, Edinburgh, and the provinces, have been carried out in appreciative regard for the exigencies of medical and surgical work and teaching, they awaken our sympathy in a special sense and degree, but there is an inner circle still, and we should be glad to know that the needs of science in its study have been as well cared for as the paraphernalia of its operations when on parade.

Hospital extension may proceed rapidly and effectually without being accompanied by any movement which can be dignified with the name of "progress." As civilisation becomes more complete, it is natural we should grow increasingly kind-hearted and good to the suffering poor. This humanising of man's nature is the contingent effect of that abandonment of savage aims and practices in which civilisation consists; but when we speak of progress in this connexion, we refer to the special enlightenment that dawns on the mind as the momentum of intellectual enterprise increases. Every step forward opens up a new area of inquiry. The point of sight is advanced, the horizon takes a wider sweep, and the view is expanded. Progress implies the recognition of larger fields, and the utilising of better opportunities. It is not enough to do for a thousand patients what we have previously done for five hundred, or to instruct a large class of pupils as a smaller number have

previously been trained. New branches of work should spring from a strengthened and improved stock of energy. We sometimes question whether this necessity of vital progress is adequately realised. In science, above all other forms of activity, it is important to avoid mistaking increased exertion for better work. Looking at the question from this (which we believe to be the only worthy) point of view, it is impossible not to feel a certain amount of anxiety lest the pressing needs of science should be overlooked in the haste to comply with the supposed demands of philanthropy. We are careful to say the *supposed* demands, because true success in practical love for man will be found to consist in securing the *best* aid science can give in sickness rather than the largest amount of such service as medical art without medical science—in a vital sense—is prepared to render. It is an improved quality of work we want, instead of simply an increase in quantity. And to further progress, of the sort to which we now refer, it is essential that the provisions for medical work at hospitals, and in the schools attached to these institutions, should be as much improved in their character as they are extended. This is the point in regard to which medical committees commonly find it difficult to enlighten the lay managers of charitable institutions. These gentlemen do not readily perceive that the provision of extra microscopes and medical apparatus, the construction of a more commodious room for pathological purposes with better fittings and appliances, the addition of a photographic department to the establishment, and a score of the other so-called "luxuries" and "toys" of science, may have fully as beneficial effect on the work of the hospital, as an institution for the cure of disease, as any increase in the number of its beds. In brief, it is not less necessary to spend money in providing for the work of study and teaching than in enlarging the capacity of a hospital and enabling it to extend the area of its usefulness. It gives us sincere pleasure to believe that the scientific requirements of medical and surgical art have received advanced recognition in recent building schemes. It only remains to hope that those who hold the purse-strings of the institutions recently extended will continue to recognise the claims of progress, and that the hospitals and schools which have been so liberally enlarged may be not less generously and efficiently provided with all the appliances which Science requires in her work, and without which she can never be progressive, however widely her sphere of possible usefulness may be extended.

THE appearance of the special report of the Select Committee on the Medical Act (1858) Amendment (No. 3) Bill (Lords), together with the proceedings of the Committee, minutes of evidence, and appendix, will serve to remind members of the Select Committee of the subject and of its chief points. We do not think so lightly of statesmen and politicians as to believe that they take no interest in matters that do not come within the range of party politics; and at a moment like this, when these politics "run high," and there is what we would call a state of tension in the political atmosphere, we can readily imagine that Mr. FORSTER and his colleagues find some relief in turning to a subject of equal interest to both parties and to all classes in the State. For what class is there that is not liable to disease, and therefore interested in the efficiency of that profession whose function it is to abate disease and to avert death? One thing is clear, that the question of the organisation of the Medical Licensing Boards in Great Britain is raised—raised so thoroughly and so radically—that it cannot be well settled in any light or evasive way. And one other thing is clear, that on Mr. FORSTER and his colleagues will practically devolve the duty and the responsibility of settling it, and so determining, probably for a generation or two, the efficiency or otherwise of our examining system, and the harmony or otherwise of the profession

It is to no purpose to say that we are on the eve of a dissolution of Parliament This question will survive the dissolution of Parliament, and so doubtless will Mr. FORSTER and most of his colleagues. Further, we may be permitted to say that on no one could the duty of presiding over such an inquiry be more fitly placed than on Mr. FORSTER. The questions involved in this inquiry are essentially educational. In the last result, of course, they are questions of special and technical education. But there is a general agreement that the whole possibility of raising the special and technical education of the medical profession turns upon the possibility of raising the tone and quantity of general education. Mr. FORSTER is, and will historically be, associated with the greatest national impetus to general education which has ever been given in Great Britain. He has done for general education what all Medical Bills aim at doing for medical education—raised the standard of it. Nobody thinks of saying that because a certain minimum result is insisted on in schools by the Lords of the Privy Council the general standard of education is lowered. On the contrary, it is felt to be immensely and everywhere raised. And on this basis of a higher and better general education we shall be enabled to build better special educations. Professor TURNER, indeed, in his interesting evidence, expresses the strange fear that the raising of the *minimum* standard of medical examination would depress the higher standards. Nobody is more likely to see through such a fallacy than Mr. FORSTER, and, indeed, we may hope that Professor TURNER has seen through it long ere this. He and his friends, who object to the consolidation of the licensing boards, do so on three grounds, so far as we are able to understand. First, and in the interest of general medical efficiency, that it would lower the general standard of medical examinations. Secondly, and again in the general interest, that the consolidation of Boards which has been tried in Germany, and abandoned on account of its inconvenience and cost, would after trial be abandoned here for the same reasons. Thirdly, and in the interest of the Scotch Universities and Corporations, that these institutions would be pecuniary losers by the change. Men passing the mere licensing examination would, it is said, be satisfied with that achievement, and not care to distinguish themselves by passing an examination of a higher class. They would also be unable—so say our Scotch friends,—on account of the money-cost of a licence under Conjoint Schemes. The first and the third arguments stand or fall together. If Mr. FORSTER and his colleagues can really bring themselves to believe that to raise the minimum standard of medical ex-

aminations will be to lower all medical education to that level, then there is an end of the controversy, and we must continue indefinitely the present various, unequal, and incomplete standards, under the delusion that variety is good, though it be a mere variety of inefficiency. Our belief is a confident one that institutions like the Scotch universities, which have no rivals in medical education, will find, under a higher minimum examination, a greater demand for their degrees. If otherwise, it will be the first instance in which the raising of the base of a pyramid has not raised the apex of it, and we shall have the interesting novelty of a revolution in physics. Professor TURNER'S argument from the alleged failure of the Staats Examen is equally unconvincing, and, if narrowly examined, will be found to make in favour of a Conjoint Scheme. He speaks (p. 223) of the absurdity, "in Germany," of a candidate having, in order to get his licence to practise and his degree, to go through two examinations in the same place, by the same examiners, and on almost exactly the same subjects. But the case of the English candidate is harder still: he has to pass two practically identical examinations to procure a double qualification, a mere licence to practise his profession. He speaks of the complaints against the one-portal system in Germany, on the score of the students having the expense to go to and reside in Berlin; but at present students in Britain must, as a rule, go to one of the metropolitan towns for their qualifications, and all Conjoint Schemes contemplate the establishment of a licensing examination in each division of the kingdom respectively. He has not shown that the existence of twenty portals to the profession in Germany is not an evil, as nineteen in this country are shown to be, or that the jealousy of the universities in Germany, as suggested by Dr. LUSH, had not something to do with the abandonment of the one-portal system.

The great question of the constitution and working of the General Medical Council remains where it was placed by the evidence on which we have already commented. Mr. MILLER was asked, on the last day of the sitting of the Committee, to give some returns of the Recommendations of the Council and of their results, and, if possible, to include the Recommendations of the chief Committees on Education. The Appendix contains absolutely no disproof that we can see of the substantial case against the Council—that time and money are wasted by discussing the same subjects over and over again; that the reports of its best committees are forgotten and not acted on; and that the Council is afraid and unfit, from the delicate nature of its own constitution, to exercise any direct authority on the several licensing bodies. The great Report of 1869 is given in the Appendix; but it is not said that the chief recommendations of the committee—a committee containing Mr. SYME, Mr. CÆSAR HAWKINS, Dr. ACLAND, Dr. ANDREW WOOD, Dr. ALLEN THOMSON, Dr. AQUILLA SMITH, Mr. HARGRAVE, Dr. APJOHN, Dr. SHARPEY, Dr. PARKES, Dr. CHRISTISON, and Dr. STOKES—remain unfulfilled in 1879! and it admits of proof that these recommendations have been almost forgotten, though the outcome of the deliberations of the representatives of the three Royal Colleges, of the Universities of Edinburgh, Glasgow, Oxford, and Dublin, and of the Crown, in possession of the most ample materials in the shape of communications from all the principal teachers of the country for the formation of a grave and responsible judgment!

THE doctrine of Metastasis is not dead. If anything, it has risen again of late years into a position almost as high as that it occupied at the very dawn of medicine. Of all diseases in which this doctrine has been applied facial erysipelas stands foremost. Its acutely spreading nature, its frequently rapid subsidence, coinciding with grave constitutional or visceral complications, must always have laid it open to be so interpreted. Of all its complications, meningitis and pneumonia stand foremost. It is true that the supervention of each of these, with a fading cutaneous inflammation, might be accounted for by a continuity of inflammation along contiguous parts. But there is often no evidence of this, and "metastasis," the mysterious *Deus ex machinâ* of medicine, is held to be the cause of the rapid change in the locality of the inflammatory process. We all know how fond the "ancients" were of this explanation for many inscrutable facts of disease; we know how the laity of the present day cherish the same views, and even, it must be confessed, how the profession itself is compelled occasionally to adopt them. A recent careful contribution to the subject—one more step attempted for the dispelling of metastasis,—is furnished to the *Revue Mensuelle* for September by Dr. STRAUS. After a brief historical review, in which he points out the paucity of writings upon a form of pneumonia which could strictly be called erysipelatous, he relates the following case:—A young journalist, twenty-six years of age, muscular and robust, neither addicted to alcohol nor the subject of syphilis, was attacked with facial erysipelas on March 10th. He was admitted into the Menilmontant Hospital, under the care of Dr. STRAUS, on the 15th, by which time the eruption had extended all over the face and was invading the scalp. On the 17th defervescence began; the eruption ceased to spread; desquamation set in, but there was great prostration. Six days later he had pain in the right side of the chest, without any rigor, and cough without expectoration. On the 24th there was acute fever, sore-throat, injection of tonsils and fauces, impaired resonance and pneumonic crepitation at the base of the right lung. On the 25th the throat condition was worse, and the pneumonic signs had extended, and on the 27th he died. It must be confessed that reading the case thus it seems most readily explained on the ground that he had been attacked with pneumonia during convalescence from erysipelas; that there was no direct causal relation between the latter and the former; that the supervention of the lung disease was a coincidence. But Dr. STRAUS does not think so. Clinically the insidious onset of the pneumonia, its rapid extension, and the absence of any other exciting cause, led him to think it depended on the erysipelas itself. He holds this to be borne out in a striking manner by the results of the post-mortem examination. The face was livid, not swollen. There was a thick, greyish coating to the tongue and palate; the pharyngeal mucous membrane was bright red—an appearance ceasing abruptly at the œsophagus. The right lung was hepatised throughout, the extreme apex alone being crepitant. All the rest of the organ presented a greyish but not very granular surface on section, studded with small

reddish islets. The left lung was congested. The larynx was normal, but the tracheal mucous membrane, from the third or fourth rings downwards, was of a bright scarlet colour, contrasting markedly with the pallor of the laryngeal mucosa. Below, this vivid injection ceased at the level of the left bronchus, and did not occur in any of its divisions, but it continued throughout the right bronchus even to its smallest branches. There was no exudation. The redness was seen to be due to very fine vascular injection; it was much more intense than usually seen in pneumonic lungs, and was most marked opposite to the interannular spaces. Microscopical examination of the affected lung showed a notable absence of fibrinous moulds and filaments, as in ordinary croupous pneumonia; the alveoli were stuffed with leucocytes, mingled with swollen multinucleate epithelioid cells; and the trabeculæ and interlobular septa were also greatly infiltrated with inflammatory cells. The absence of fibrin was as marked in the red as in the grey parts of the hepatised lung. All these characters point, the author thinks, to the pneumonia being peculiar, and produced by the direct extension of the erysipelatous inflammation along the respiratory tract—that, in fact, he had to deal with a true "erysipelas of the lung." The curious thing is that the laryngeal mucous membrane should have so wholly escaped, if this view be correct; for, in the first place, had it been attacked, it is likely that œdema of the glottis would have carried off the patient before the process could have reached the lungs, and, in the second place, its exemption would be strange indeed, and would cause one to fall back on the doctrine of metastasis, which the author has sought to avoid. A third hypothesis propounded by the author is that the larynx was affected in so transitory a manner that no trace of its involvement remained after death. This is conceivable; only opposed to it is the fact that there were no clinical phenomena to bear out the idea of any laryngeal trouble whatever. So, as to this case, it must be left undecided whether the pneumonia were a mere coincidence in the convalescence of facial erysipelas, whether it were an extension of the erysipelatous inflammation directly from the skin to the lungs, or its indirect conveyance through the medium of metastasis, the pulmonary inflammation occurring on the retrogression of the cutaneous. These are interesting speculations, open to further examination before it is finally concluded that there is such a disease as "erysipelas of the lung."

Annotations.

"Ne quid nimis."

THE EXPEDITION TO CABUL.

OUR correspondent's letter from India by this week's mail furnishes some particulars of the medical arrangements in connexion with the Cabul armies.

The Field Hospitals of the Jellalabad field force (Bright's division), completely equipped, have marched for the front with the brigades to which they have been appointed, the great and ever-present difficulty of transport having been surmounted; on the urgent representation of Surgeon-General Ker Innes, C.B., the Commander-in-Chief has sanctioned the whole of the medical and sick carriage being placed at the disposal of the Principal Medical Officers of the columns, who will allot to hospitals, corps, and batteries as considered requisite. In the absence of any regularly trained Army Hospital Corps, the ambulances, dhoolies, and bearers of the Kurum force (General Roberts) have been placed under the direction of Surgeon-Major Isidore Bourke, who will organise the Kahars into stretcher-bearers, giving them such rough-and-ready instruction as time and circumstances will admit. Surgeon-Major Evatt has joined the staff of Brigadier-General Gough, V.C., C.B., as senior medical officer of the 1st Brigade. Profiting by the experience of the late Afghan expedition, when the troops, and especially the native followers, suffered so severely from the intense cold with insufficient clothing, the Government have very wisely promulgated an order authorising the free issue of warm clothing, &c., on the following scale:—

British Troops, per man:—one waterproof sheet, English; one jersey, woollen; two pair of warm socks; one pair of mittens, one pair of boots, one pair of puttees (flannel bandages for gaiters, on payment); one Balaclava cap, one postheen (sheepskin coat) or a wadded coat; long postheens for sentries at the rate of 15 per cent.

Native troops to be provided with a similar equipment except a blanket to be supplied instead of the jersey, shoes in place of boots and a postheen if procurable, or a warm lined coat in lieu.

Followers, per man:—one country blanket, one waterproof sheet, one pair of native shoes, one postheen or warm coat, one pair warm pyjamas (drawers).

Commanding officers are by orders from the Commander-in-chief held personally responsible that these scales are complied with, and that their regiments and followers are actually in possession of these articles before marching for the front. The cold in Cabul and along the lines of communication will be very severe for the next five or six months; warm clothing and bedding will therefore be an urgent necessity, and large quantities have been sent to Peshawur and Kohat for transmission to the troops at the front.

Up to date the health of the troops in Cabul and *en route* is excellent, the 67th, 72nd, and 92nd Highlanders especially being noted for their robust constitution. Deputy Surgeon-General Townsend, who was wounded on the 27th September while riding behind General Roberts, has been compelled to return to Murree; the ball penetrated one and a half inches below the right eye, passing backwards and lodging, splintering a portion of the superior maxillary bone.

Dr. Hassard, the Principal Medical Officer with General Bright's force, has established sections of Field Hospitals for native followers with the Ambulant Brigade hospitals; these will be an immense boon to the sick native, who in addition to illness becomes miserably incapacitated by cold.

Mule carriage for the sick and a dozen ambulance carts have been constructed at Peshawur, and accompany the Division, the road as far as Jellalabad being now quite fit for wheeled conveyance.

The Base Hospital at Peshawur has been placed under the charge of Surgeon-Major F. W. Moore, and is, in accordance with the Précis of Field Medical Arrangements, equipped for 7 per cent. of sick. The movable Field Hospitals are similarly completed for 5 per cent., orders for the systematic and periodical evacuation of sick to the Base Hospitals, to prevent the possibility of overcrowding of the ones in front, being most stringent. To help in carrying this out effectually rest depôts have been formed at Jumrood, Ali Musjid, Bhosawal, Dakka, Barikab, and Safed Sung.

THE METROPOLITAN WATER-SUPPLY.

A BETTER hope may be entertained of a satisfactory solution of the vexed question of the water-supply of the metropolis when those who are most interested in the matter begin to understand clearly what are the social conditions which have hitherto frustrated efforts towards this

good end. A meeting of ratepayers recently held in Southwark to discuss the grievances of water-consumers within the Bills of Mortality was distinguished among the several meetings which have been held of late on this subject by the excellent sense of the chairman's (Mr. J. Beal's) observations, and the sound views he entertained regarding the conditions under which successful reform could alone be calculated upon. He told the meeting that the subject it was assembled to consider was of no recent date, and that he held in his hand the heads of a series of resolutions passed at a public meeting forty years ago, which had been called together to discuss the same subject, and which in effect asked for reforms of the same nature as those which were now demanded. If Parliament and their representatives in Parliament had been apathetic during this long period to their just complaints, and still continued to be indifferent, it must be attributed to the unfortunate lack of unity among the metropolitan ratepayers as a whole, and the absence of any co-ordinating element between the several districts of the metropolis on questions concerning each district equally. There was no proper means of faggoting the several representative metropolitan sticks, and while each stick independently had proved fragile, the mode of tying the several sticks together into a firm and unyielding bundle had still to be found out. Nevertheless, it was suggested and approved by the meeting that the Corporation of the City should be asked to give aid, forming a rallying point for the several districts, and so furnish a provisional bond of union for them. The importance of Mr. Beal's view of the subject rests in the recognition that the evils attaching to our water-supply are of a sort from which relief is only to be obtained by combined pressure of the ratepayers, and that such pressure, if it can be promoted, will prove irresistible.

ST. BARTHOLOMEW'S HOSPITAL.

ON Monday last the Prince and Princess of Wales visited this hospital to open that part of the new buildings of the medical school which has been completed. The buildings consist of a very beautiful library, a museum, and a physiological class room, each affording accommodation for at least 100 students, and built from the designs of Mr. I'Anson. The block is faced with stone, and the windows open upon Smithfield. It stands not far from the site of the old Giltspur-street Counter, the school happily replacing the now destroyed prison. It forms the first instalment of still larger and more important buildings, which are to include an anatomical theatre capable of accommodating 400 students, a fine dissecting-room, and several minor theatres and class rooms. When these are completed the arrangements for teaching will probably be unsurpassed. Their Royal Highnesses arrived punctually at one, and were received by Sir Sydney Waterlow (the treasurer), by the Almoners, and by the senior surgeon (Mr. Holden) and senior physician (Dr. Andrew), by whom they were conducted through the library to the museum. They were here enthusiastically greeted by a large assemblage of visitors more or less immediately connected with the hospital and by the students. An address was spoken by the treasurer, in which he gave a brief history of the hospital, dwelling on its antiquity, 800 years having elapsed since its foundation by Rahere, the minstrel and jester to Henry I., its steady growth in wealth and usefulness, the brilliant names which were associated with its history—Harvey, Pott, Abernethy, Lawrence, and others yet living—and the progressive enlargement of the medical school, which had of late years become so large as to render an extension of the school buildings an absolute necessity. A feeling allusion was made to the loss the hospital and school had recently sustained in the death of Mr. Callender. The Prince, after expressing the gratification that it gave him to be present, trusted that the additions made to the old hospital might prove of service to it, and then declared the buildings open. The Prince and Princess then proceeded to the great hall, where luncheon was provided for about a hundred guests. The usual loyal toasts were given and warmly received, and excellent speeches were made by Sir James Paget, Mr. Holden, and Sir George Burrows, and the proceedings then terminated.

AN ADVANCE IN THE ART OF DIVING.

THE Royal Polytechnic Institution, which is now being remodelled, with the worthy object of bringing it back to its original position as a school of science and the useful arts, offers at this time an interesting and practical study on a new advance in the diver's art. The system is called Fleuss', and consists in allowing the diver, in a diver's dress, to descend below the water, and to remain under the water for a long time without the use of any pumping apparatus for the supply of fresh air and for the removal of the products of respiration. From observations made on Monday last, it is inferred that the diver is able to go to the bottom of the large reservoir, and, at the depth of twelve feet under water, move about as freely as possible, the only communication with those above being a connecting cord by which to make or receive signals. While under observation the diver was thus immersed for twenty minutes, and would have remained much longer had it not been necessary to request him to return to *terra firma*. After he came out of the water, he remained locked up in the diver's dress some minutes longer, and it is said that in a previous experiment he had been under water more than an hour.

On the headpiece being removed from the diving-dress, the diver was found to be breathing easily, and in no way fatigued or chilled. The process consists in the carrying down in the breastplate or helmet of the dress a large store of air compressed. The diver wears an ori-nasal mouthpiece exactly like a Sibson's chloroform inhaler, which is strapped firmly over the nose and mouth, and from which a breathing-tube proceeds downwards, to enter probably a metallic case which surrounds the body like an ancient armour-plate. How the supply of air for breathing is regulated, and by what means the exhaled breath escapes, we are not aware. It is easy to foresee that the invention may prove to be of the utmost service, not only for rescuing property from the deceitful sea, but for saving life.

BABY-FARMERS.

THE sentence on the baby-farmers at Chester will have been endorsed by public opinion; but the real question underlying the case is one that cannot be settled by any fiat of justice against offenders. The socio-political problem, how best to provide for the large class of children who are practically deserted by their parents, will not be solved by the conviction of inhuman baby-farmers. The main issue remains, How are baby-farms to be placed on a basis which will leave them free from objection, or as little open to abuse as may be? On a recent occasion we discussed the general question on broad grounds, and arrived at the conclusion that a certain measure of security might be obtained by adopting a particular mode of payment, which was described in some detail (THE LANCET, Oct. 25th, p. 622). We would again direct attention to this suggestion, and ask that it may be judged as the urgency of the problem demands. It must be assumed as a postulate in the discussion that something answering to a baby-farm is necessary and inevitable. The sole question for society is, how is it possible to protect the lives of unfortunate infants abandoned by their parents—too often, it is to be feared, in the hope that death will in some way overtake them,—and to secure the proper treatment of orphans and children left practically dependent on

the care of strangers, and by what law and scheme of supervision can fair kindness be secured for them? We hold that a well organised and carefully administered system of inspection at short and uncertain intervals is imperative. The plan we suggested in the recent leader on this subject would satisfy the first condition of success in dealing with baby-farms and baby-farmers—namely, that their whereabouts should be easily ascertainable.

RABIES AND HYDROPHOBIA.

WITH regard to the urgent need there is for the wide diffusion of a knowledge of the early symptoms of rabies, to which we lately again called attention, we are reminded by Dr. Page, of Kendal, how much may be done, during the inaction of Government, by medical officers of health, in their respective districts, to supply the want. We have before us a very good *résumé* of the early symptoms of rabies, a translation of the memorandum drawn up for the Town Council of Vienna, which Dr. Page, as medical officer of health for the rural sanitary district of the Ulverstone Union, has circulated throughout his district. It would be well if all medical officers of health would follow Dr. Page's example. The account might with advantage be shorter, and printed in larger type, but as an example of what is needed it is, as we once before pointed out, excellent. No doubt Dr. Page will supply a copy to any medical officer of health who may desire to follow the example, or they will find a good account of the early symptoms in the French Report, which we published last year, or in Mr. Fleming's contribution to the "Report on Rabies and Hydrophobia." Dr. Page suggests that a copy of a similar account should be given to every person who pays dog tax, and to every member of the constabulary. It might well be printed upon the dog licence.

Meanwhile from various parts of the country come reports of cases of rabies in dogs or hydrophobia in man, which suggest that, not only does the late prevalence of the disease show no signs of diminution, but that it is actually increasing. Cases of hydrophobia are reported from Glasgow and Burton-on-Trent, and an account comes from Taunton of the ravages of a mad dog, which bit a large number of animals and some persons.

Terrible as are the ravages of mad dogs, we must be thankful that we are free from that even more fearful calamity—mad wolves. The *Golos* of Oct. 13th has given an account of the ravages of a mad wolf at Barvenkoff, which had apparently contracted the disease in consequence of the carelessness of the inhabitants of a district eighteen miles away, where a mad ox had been buried so superficially that the night after it was buried it had been unearthed and eaten by wolves. At Barvenkoff the inhabitants were assembled at a fair; the men were in the drinking shops, and the women and children in charge of the carts, when a gigantic wolf, frothing at the mouth, and with tongue hanging out, entered the town, and rushed at the carts. The horses and men dashed in all directions, but the majority, getting entangled, fell and overturned the carts, and terrible confusion ensued. The wolf, when within a short distance of the first group of carts, turned round, sprang on to a woman who was running past, and in a moment she was prostrate on the ground, having lost her nose, scalp, and the lower part of her face. The wolf then attacked a lad, but at the moment it had bitten the boy's face and hand, a pig rushed at the wolf and bit its tail. After attacking the pig (which certainly manifested a valour, if not a discretion, that ought to have been imitated by the men who had rushed out of their drinking shops) the wolf ran down the main street, attacked a woman with a baby, then two boys about four years of age, and having bitten their heads through to the brain, rushed up the street, and after biting several other persons turned off into the railroad. A crowd armed with guns, scythes, &c., gave chase and came up to the wolf about a mile out of the village. A peasant shot the wolf in the mouth, but the animal sprang at him, and, notwithstanding a blow which shattered the butt end of the gun, the wolf seized the peasant by the side without inflicting much injury. The man then firmly gripped the wolf with both hands, and a policeman shot the creature with his revolver. Twenty-five persons were bitten, the wounds in ten being dangerous.

We lately commented on the experiments which showed how convenient a test for the poison of rabies is presented by the rabbit on account of the shortness of the period of incubation in that animal. The test has been employed to ascertain the virulence of the blood and saliva in the case of a man suffering from the disease at the Hôpital Lariboisière, Paris. The result was the same which has been previously obtained. Inoculation with the blood gave negative results, but when the saliva was employed rabies was conveyed.

"POISONS IN DOCTOR'S SHOPS."

UNDER this title a contemporary comments on the unfortunate case which lately occurred at the West-end, in which a page, employed to dust a surgery, took advantage of the opportunity to commit suicide by swallowing some prussic acid, and remarks upon the boy's "dangerous opportunity of abstracting something," observing that it was believed to be the invariable practice of the profession to keep dangerous chemicals, especially deadly poisons like prussic acid, safe under lock and key. Such a practice is certainly desirable in the case of certain well-known and powerful poisons, but it is scarcely practicable to keep all poisons which might be used to destroy life constantly under lock and key. Every surgery and chemist's shop affords the greatest facilities for a suicide, since the necessary practice of labeling toxic substances "Poison" only serves to point them out to those who seek them. But what is surprising in the case is that the boy was allowed access to the surgery after having displayed for some days unmistakable symptoms of aberration.

VIVISECTION.

IT was not to be expected that the manly defence of the medical profession which was lately made by Canon Duckworth would be allowed to pass without the anti-vivisectionists, through their chosen mouthpiece, making a vigorous onslaught upon him for venturing to have any opinions of his own. To Canon Duckworth the thanks of the medical profession are emphatically due, and we beg to endorse the opinion which he has expressed to the effect that the few professional names found upon the lists of the anti-vivisectionists are of no weight whatever when compared with the numbers of the highest reputation who declared themselves in favour of leaving the science of physiology to pursue its course unhindered by harassing enactments. It is interesting to observe how those who profess such unbounded love for the lower animals, and who professedly shudder at the bare thought of the least physical injury done to creatures beneath them in the scale, throw all their mercy and charity to the winds when there is a chance of inflicting a moral injury upon their intellectual superiors and equals. The manner in which the anti-vivisectionists have treated those who have ventured to differ from them, shows that at best they have no appreciation of real mercy. The process of gibbeting by advertisement which has been practised upon many honourable members of our profession, and now upon Canon Duckworth, is, we have no hesitation in saying, as unworthy an act as ever entered into the mind of man to perpetrate. We feel sure, however, that the sound sense which ever has

corrected the impulsive sentimentalism of the English will not allow them to be guided, in their judgment of a profession or of individuals, by those whose business it seems to be to dip their pens in venom and exercise their "Christian" skill in inflicting wounds on others, no matter how lasting or how deep, provided they leave no scar. Canon Duckworth has declared his intention of not continuing the correspondence into which he has been dragged. In this he is well advised, for it is manifestly undesirable that the idea should get abroad that he is dealing with foemen who are in any way worthy of his steel.

THE "GUILD OF ST. LUKE."

WE yield to none in respect for religious convictions, religious principles, and rational enthusiasm in the cause and interests of what is believed to be religious truth. It is, however, with unfeigned apprehension we have observed the movement to give increased publicity to a "Guild of St. Luke." Medical men, in common with the rest of free citizens, have an unquestionable right to enter into any combination for the propagation of their views; but we think something is due to the instinctive taste and the sense of propriety which prevail in the profession of which they are members, and which clearly point to the expediency of avoiding even the "appearance of evil." It would be *evil* if medical practitioners came to regard the influence their profession gives them in the bed-chambers of the dying and the family circles of their *clientèle*, as qualifications or opportunities to be laid at the foot of a sectarian altar. Faith is one thing; faiths stand on a different footing. We object to the organisation of medico-clerical propaganda, because the "cure of souls" is, and ought in the interests of society and sound progress to remain, a function wholly apart from that of curing diseases of the body. The two classes of work were attempted by a single set of men—the priests—in the middle ages, and the combination did not, to put the fact courteously, succeed. It would be a calamity if any effort were now made to restore the bad state of things which then, happily, broke down. The "Guild of St. Luke" may, or may not, have an ulterior purpose in relation to the possible connexions of medicine and divinity, but, in the name of the profession, we question its expediency; and, without challenging the right of individuals to form associations with particular objects, or casting any imputation on the motives of the gentlemen interested in this movement, we *do* protest against an organisation which may be put to evil purposes, and most certainly bears an uncanny appearance.

REVACCINATION: AN EXCELLENT EXAMPLE.

WE have been favoured by a correspondent with a copy of a circular issued to the parents of pupils of the Ampleforth College, York, by the Principal (the Very Rev. T. S. Kearney), which cannot be too highly commended. It relates to revaccination, and sets forth that the advance made by sanitary science of late years has thrown new and unexpected duties upon the heads of colleges. "One of these duties," the circular proceeds to state, "is that of safeguarding the future lives of those submitted to their care from any possible attack of small-pox. It has now been discovered that infantine vaccination by itself is not sufficient as a permanent protection against the terrible scourge, but that in order to give perfect security vaccination must be repeated at about the fourteenth year. As at this age boys are usually at schools and colleges, it naturally devolves upon the heads of these institutions to take the initiative in carrying out the necessary revaccination." Next it is observed that this ought not to be done without the full sanction of parents, and the Principal then asks that he may be allowed to have the children under his charge revaccinated by the visiting physician of the college. In confirmation of the opinion expressed as to the importance of revaccination, the authoritative statement of the memorandum of the Local Government Board on the subject is quoted, also certain opinions of Dr. E. C. Seaton, the medical officer of that Board. It is noteworthy that this circular has been issued at a time when Ampleforth and its neighbourhood is entirely free from small-pox, consistently with the advice of Dr. Seaton that the operation ought to be done when it can be done leisurely and free from the disturbing influences of fear and panic. Altogether the circular is admirably conceived. It betokens a high sense of the responsibility attaching to the heads of colleges and schools in this matter, as well as just conceptions of the mode in which revaccination may be best compassed under the circumstances. May this excellent example be widely followed.

MEDICAL RELIEF ON A LOAN SYSTEM.

AT the annual conference of guardians of Surrey, Kent, Berks, Hants, and Sussex, lately held at Brighton, at the instance of Mr. Baldwin Fleming, one of Her Majesty's inspectors, a resolution was passed unanimously, urging that relief, and especially medical relief, should be more constantly given on loan. This system has been tried in Bradford, with the effect of reducing the applications for medical relief 90 per cent. The medical profession will regard this action of Boards with satisfaction, as tending to restore some of the lapsed respect for medical services, the absence of which so deeply demoralises the community. Wares of any other kind are regarded as things to be paid for; but medical service and advice, even in the dead hours of the night, are claimed as of right, without pity for the men who have them to give. If all Boards would take the same course, the most powerful assistance yet devised would be given to sound provident dispensaries. We commend the same principle to the serious consideration of the committees of charitable dispensaries and hospitals, of course with all precautions against hardship to the really poor.

POVERTY AND MORTALITY.

THE greater rate of mortality among the poor than the rich is no new fact, although Dr. Drysdale may have done well to draw attention afresh to it, as he did at the last meeting of the Medical Society. The chief causes of this increased mortality are not far to seek,—greater exposure to accident and violent death, unhealthy occupations, and the total neglect of well-established sanitary laws, are foremost among them. Reformers, up to the present time, have looked forward with hopefulness to the time when by increased knowledge violent deaths will be lessened, and the laws of health more carefully obeyed. But Dr. Drysdale appears to have no hope of good from such means; for him the rapid increase in population, making and keeping people poor, is the one great cause of needless loss of life, and the one hope of lessening the death-rate lies in diminishing the birth-rate. The facts he stated by no means support such an inference. We have yet to learn that the majority of the evils at present surrounding the poor are necessarily attendant upon poverty. We have yet to see a poor population living in dry, well-drained, well-ventilated houses, properly supplied with pure water, and the means of disposal of refuse. And we have yet to become acquainted with a poor population spending their scant earnings entirely, or in a very large proportion, upon the necessities of life, for such is not the case when half the earnings of a family are thrown away to provide adulterated alcoholic drinks for one member of it. Until reforms such as these, and others, have been carried out, and the poor are able and willing to conform to

known physiological laws, it is premature to speak of taking measures to lessen the birth-rate—a proposal, be it said, which makes the humiliating confession of man's defeat in the battle of life.

THE ARMY MEDICAL SCHOOL.

THE Winter Session of the Army Medical School was opened at Netley on the 1st instant. The opening had been postponed from the 1st of October, the accustomed date, to the 1st of November, under the expectation that the long-promised new Warrant for the Army Medical Department would be issued sufficiently early in the month to admit of a competitive examination being held for candidates for commissions in this branch of the public service. The warrant not having appeared, however, no competition has taken place, and no candidates for the Army Medical Department have gone down to Netley, only candidates for commissions in Her Majesty's Indian Medical Service and in that of the Royal Navy being in attendance on the occasion. The same has been the case during the two previous sessions of the school. For the Indian Medical Service seventeen candidates were now present, for the Royal Navy eight. Deputy-Inspector General J. D. Macdonald, F.R.S., the Professor of Naval Hygiene at the school, delivered the introductory. The principal part of his discourse was devoted to illustrations of the rates in which health and efficiency have been increased in ships of war in proportion as particular hygienic points have been attended to, and, of late years, in proportion as the difficulties in the way of ensuring a sufficient supply of pure air and other sanitary conditions connected with the changes in construction from wooden to iron ships have been overcome. All the staff of the hospital and school were present at the lecture, together with a few visitors, chiefly consisting of retired naval and military officers residing in the neighbourhood.

MR. ERASMUS WILSON AND THE MARGATE INFIRMARY.

ANOTHER act of great practical beneficence is announced on the part of Mr. Erasmus Wilson. It is his intention to build a new wing for the Margate Infirmary, to contain wards for seventy patients, a tepid sea-water swimming bath, and a chapel for 300 persons. The cost, it is estimated, will exceed £20,000. Mr. Wilson has made good choice of an institution on which to spend some of his good intentions. Few infirmaries are of more practical value than the Margate one. But its usefulness has considerable limitations. Patients are kept waiting long and sorely for admission, when even it does not appear that all the beds are occupied. The mere increase in the number of beds will not mend this state of matters, which we commend seriously to the consideration of the Committee. In the face of such an act of munificence as that we now record, we cannot think that any reasonable appeal to the public to enable the Committee more thoroughly to utilise the existing beds would fail.

THE REGISTRATION OF INFECTIOUS DISEASES.

THE Norwich Improvement Act—a private measure passed during the last session of Parliament—has just come into force, and the working of one of its more important clauses has great interest for the medical profession. By this clause it is enacted that "notice be given to the Corporation of any inmate of any building used for human habitation in the city who is suffering from small-pox, cholera, typhus, typhoid, scarlet fever, diphtheria, or relapsing fever, or any other disease which the Corporation may from time to time, with the sanction of the Local Government Board, by resolution of the Council specify." For this purpose the Corporation has distributed to each registered medical practitioner resident or practising in the city, blank forms, one of which he has to fill up and give to the occupier or person having the management of the building, to be forwarded by him to the Corporation. This certificate states the name, residence, and disease of the patient, and the name of the occupier or other person having the management or control of the building in which the patient is. If no medical practitioner be in attendance, it is the duty of the occupier or manager of the premises in which is a patient with infectious disease, to notify the fact to the Corporation. Any person offending against this enactment renders himself liable to a penalty not exceeding £5; and the Corporation pays a fee of 2*s.* 6*d.* to the medical practitioner for each certificate duly given, provided that not more than three become payable to the same practitioner within thirty days for certificates in respect of the same disease in the same building. We need hardly state that we quite approve of the efforts thus made to become thoroughly cognisant of the existence and spread of infectious diseases. Beyond the more purely medical aspects of the question, are others of social importance, and we shall watch with great interest the working of this act in Norwich. It is only right that the responsibility of the medical practitioner should end with giving the certificate; it is not his duty to report directly to the Corporation, and the wording of the Act relieves him from the unfair and invidious position he might otherwise have been called upon to occupy.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

THE session of the Society of Medical Officers of Health was opened on the 17th ult., by an address from the President, Dr. J. S. Bristowe. The report of the Society for the preceding session, 1878–79, has been issued, showing a reasonable state of prosperity, and giving an account of the proceedings of the Society at its several meetings, the papers communicated being printed in detail or abstract. In fact the simple title of Annual Report given to this document is misleading, and in the interest of the Society should be altered. The document is, in fact, a combination of annual report with proceedings (as the term "proceedings" is commonly understood), if indeed we might not use the word "Transactions." Certainly none but the initiated would dream of looking into an annual report, in ordinary practice devoted to an account of the financial and general state of a Society, for details of papers. Yet this annual report, in addition to the address of the President, Dr. Thos. Stevenson, contains papers, several of importance, and all of interest, by Dr. Harry Leach, Professor Corfield, Dr. Tripe, Mr. Durnford Thomas, Dr. Thursfield, Dr. Buchanan, Mr. Shirley F. Murphy, Dr. B. Browning, and Mr. Gustav Bischof. Notwithstanding the variety and quantity of matter contained in the report, there is no table of contents.

TESTIMONIAL TO DR. FERGUS, OF GLASGOW.

IT is very gratifying to us to notice in the *North British Daily Mail* the report of a meeting of ladies and gentlemen in Glasgow, under the presidency of the Lord Provost, to make a present to Dr. Fergus. Dr. Fergus has been working hard in Glasgow for thirty-two years as a medical practitioner. But he has found time, in spite of the claims of an extensive general practice, for discharging the various duties of an enlightened citizen, including those of a town councillor. Besides this, he has filled several scientific positions with great credit to himself; amongst others, that of President of the Faculty of Physicians and Surgeons, and of the Philosophical Society of Glasgow. The Hon. the Lord Provost, in a very able speech, did justice to the claims of such a man to the respect of a community like that of Glasgow, and touched with great judgment the question of Dr. Fergus's recent misfortunes in connexion

with the City of Glasgow Bank. There can be but one feeling of regret at such misfortunes overtaking a man who had earned so good a right to repose; but this feeling must be tempered by admission of the magnanimity with which these misfortunes have been borne, and with which the necessity for further labours has been accepted. Further, it is no slight mitigation of them that Dr. Fergus has still the power to work, and that his patients would have been thankful for just such a degree of unsuccess as to keep him in harness. The present consisted of a very effective portrait of Dr. Fergus by Mr. Norman Macbeth, and was suitably followed by a present to Mrs. Fergus of a service of plate, and other articles of much beauty and value.

CHEST-DEVELOPMENT AND CONSUMPTION.

IT is stated "that during the last twenty-five years not a single singer has died of consumption at St. Petersburg, although this disease has outstripped all others, and now holds the first place among the causes of death in the Russian capital." From this and other facts Dr. Vasilieff draws an inference in favour of the exercise involved in singing, as a preventive measure against consumption. There would seem to be room for question as to the relation of cause and effect. It may either happen that singers are not consumptive because they can use their chest and throat freely, or that consumptive persons are not singers because the weakness which precedes disease incapacitates the chest and throat for exertion. Both of these hypotheses are true up to a certain point, but neither holds good in all cases. A very little observation will suffice to show that a good singing voice may coexist with a weak or diseased chest, whereas the perfectly healthy may be unable to sing. It was some forty years ago a common practice to give consumptive patients a specially arranged tube to breathe through with the view of exercising the chest. We venture to hope the experiment will not be repeated. Chest-development can only be accomplished in a manner consistent with health during the growing-stage of childhood, and then the most natural and convenient methods of exercise are the best. Later on in life great mischief may be done by unduly straining the muscles of the thorax and those of the throat, besides the peril of injuring the smaller tubes and air-vesicles of the lung by violent exertion, for which the organs of respiration and voice are not adapted because they have not been early trained.

DRUNK OR DYING.

WE have repeatedly insisted that a special room should be set apart at every police station for hospital purposes, and that every case of drunkenness should be treated as disease, a medical man being immediately called to see the supposed drunkard, and his fee added to the fine if it proves to be a case of misdemeanour. Were this recommendation carried into effect the public sense of humanity would not be every now and again scandalised by cases of death from apoplexy and brain disease, in which the police have diagnosed intoxication. As Dr. Hardwicke, the Coroner for Central Middlesex, very properly observed—at a recent inquest on an apoplectic patient who died while in confinement as drunk—the differential diagnosis between these two states is by no means easy to medical men, and must needs be altogether impossible to any layman, however well-trained and well-intentioned. The police assume a grave responsibility when they do not at once seek advice in these cases. Any drunken person may at any moment die of apoplexy for aught anything a layman can ascertain as to the condition of the brain and nervous centres. This is a consideration of peculiar significance, and we commend it for more careful attention than it has yet received. A man may be drunk, but he may also be dying, or he may die as a consequence of his drunkenness. There is no safety except in the measure we have long continued to urge on the authorities, and which in time they will, we believe, be compelled in self-defence to adopt.

THE ROYAL ALBERT ORPHAN ASYLUM.

A FEW years ago we gave a detailed account of this valuable charity, which is situated at Collingwood Court, Bagshot. It is remarkable for its vigorous attempt to get on without the voting system, to which so many objections attach. Our report was one of almost unqualified praise. The buildings and grounds are admirable in site, the domestic arrangements are excellent, the teaching sensible and practical, and the disposal of funds marvellously economical. At the present time 220 orphan and fatherless children are boarded, clothed, and taught in the asylum; and these children, being elected by a system free from favouritism, are invariably proper objects of such a charity.

We are sincerely sorry to learn, from a circular recently issued by Mr. William Morley, the Chairman of the Managing Committee, that this excellent undertaking is in serious distress for want of funds. The amount of annual subscriptions does not equal one-half of the actual requirements of the institution, and there is a present debt of over £2000.

We are convinced that if the peculiar merits of the asylum were better known it would be well supported, and we cordially recommend it to our readers, who will find, if they take the trouble to inquire, that there are few places where a guinea will go so far and do so much good as at Collingwood Court.

THE RIVERS POLLUTION ACT.

THE first case under the provisions of this Act was heard in the Leicester district on Wednesday last, before the Judge of the County Court. The case was that of a man who has two large tannery works for fellmongers and other purposes, which foul two tributaries of one and the same stream, being situated between them. The skins are not only washed or otherwise treated with excrementitious matter, but are said to be prepared with some preparation of arsenic. Evidence was given to the effect that although the stream, just before it entered the defendant's works, was so pure and clean as to be in all respects satisfactorily potable, it was a "thick, bad-smelling stream after the defendant had used the water." The judge did not think it desirable to order the owner of the works to purchase land at an enormous cost for irrigation purposes, but arranged that an "expert" should examine the place, and report "as to what works were reasonably practical to prevent the pollution."

THE VITAL STATISTICS OF QUEENSLAND.

THE nineteenth annual report of the Registrar-General for Queensland (1878) leaves the impression on the mind that this colony is qualifying with somewhat rapid steps to compete with the more aged settlements of the old country in death-rates. Hence it is to be hoped that the colonists will give good heed to a significant sentence on p. 11 of the report, in which the Registrar-General points out the true economy of anticipating the sanitary dangers of communities and so warding them off from the beginning. Queensland has now a population of 210,510, a birth-rate of 3625 per 1000 population (1877, 1878), and a death-rate of 20·41 per 1000 (1878), a higher death-rate than has been recorded since 1875. The mean annual death-rate of the ten years 1869-78, was 17·49. The four most fatal diseases in the colony in 1878, arranged in the order of fatality, were dysentery, convulsions, phthisis, and diarrhœa. Of the mortality from phthisis the Registrar-General observes that "the idea that obtained for many years, that the warm, dry climate of Queensland was favourable to persons suffer-

ing from pulmonary consumption, or of consumptive habits, appears at first sight not to have been borne out by the statistics of disease in the colony, the mean rate of mortality from phthisis in the nine years 1870-1878 having been 11·62 for each 10,000 of the mean population." But this death-rate is considerably increased by the prevalence of phthisis among the Polynesians. In 1878 the general death-rate from phthisis was 12·72, but excluding the deaths of Polynesians it did not exceed 8·08.

THE WEST KENT MEDICO-CHIRURGICAL SOCIETY.

THE twenty-fourth session of the West Kent Medico-Chirurgical Society was opened on the 3rd ult., when an address was delivered by Mr. J. Purvis, who had been appointed President in succession to Mr. A. Roper. Mr. Purvis dwelt upon recent advances in surgery and medicine, and gave consideration to the question of the prophylactic action of vaccination, as illustrated by a recent report of the Small-pox Hospital. He offered some observations also on the subject of animal vaccination, and expressed a hope that the day was not far distant when the Government would establish animal vaccine stations. The report of the Society for the preceding session (1878–79) shows that its several meetings had been well sustained, and that the subjects discussed had been varied and of much interest.

COLLEGE OF PHYSICIANS IN IRELAND.

CONSIDERABLE dissatisfaction has arisen owing to a regulation recently adopted by the authorities of this institution prohibiting licentiates from making use of the reading-room. One of the regulations of the medical society of the College of Physicians which holds its meetings within the walls of the College was that, a licentiate being a member was entitled to admittance to the reading-room; and on this account very many joined the Society. However, as that arrangement has been rescinded, it will be of great injury to the medical society, whose members may be expected to diminish considerably on this account. Those belonging to the new grade of members will be eligible for admittance to the reading-room, but it is rumoured that a separate room will be kept for the use of the Fellows.

ANTISEPTIC SURGERY.

A DISCUSSION on Antiseptic Surgery is to take place, at a meeting of the Metropolitan Counties Branch of the British Medical Association in the South London District, to be held at St. Thomas's Hospital on Wednesday November 26th, at 8 o'clock P.M. Professor John Wood will take the chair. The discussion will be opened by Mr. William McCormac, and it is expected that Professor Lister, Mr. Holmes, Mr. Hulke, Mr. Hill and many other hospital surgeons will take part in the discussion. We may confidently hope that on this occasion the truth of all sides of this question will be advanced—a question, in biology and surgery alike, which can scarcely be rivalled in interest and importance.

PRINCE BISMARCK.

PRINCE BISMARCK is reported to be suffering from gout and neuralgia, and from obstinate sleeplessness. The gouty forms of neuralgia are, as our readers well know, often most troublesome in old subjects, who have had many attacks of gout, and yield much less readily to treatment than the gouty neuralgias of younger persons. This is especially the case when they prevent sleep; the exhaustion from insomnia aggravates the pain and renders it still more difficult to subdue.

OUR service contemporaries reported lately an outbreak of cholera in H.M.S. *Charybdis*, which appears to have been unattended with any serious results. But yellow fever is said to have occurred in the *Shannon*, though no cases were spoken of when that vessel arrived at Valparaiso. It appears, however, that the gunboat *Beacon* has lost her surgeon, Dr. Kearney, from "fever." We quote from the *Irish Daily News*, which journal remarks that, though stationed at Bushire, she is not provided with any kind of flying deck, so that in addition to the misery caused by the intense heat of the Persian Gulf, there is no adequate provision for the sick, and their condition must, under the circumstances, be very deplorable,

A COPY of a return of deaths for Malta and Gozo during the fortnight 16th to 30th September, 1879, now lying before us, shows a death-rate for both islands of 30·52 per 1000, as compared with 28·32 for the corresponding period of 1878. Among the causes of death during the fortnight are enumerated diphtheria 1, typhoid 6, dysentery 4, diarrhœa 1, "fever" 2, gastritis 1, enteritis 24, ileus 1, tabes mesenterica 11, and teething 49. The total deaths from all specified causes were 192. The estimated population of the islands on the 30th June, 1878, was 151,980 (Malta 133,464, Gozo 18,516).

THE Waterford Board of Guardians having reduced the salaries of their medical officers of health from £20 to £10 per annum, have been requested by the Local Government Board for Ireland to reconsider their resolution, for if the salaries were not fixed at a proper sum they would arrange it themselves. In consequence of this communication the guardians have determined to allow the medical officers of health of their union the original amount of remuneration —viz., £20 per annum.

IT is announced that Dr. Hughlings Jackson and Dr. Buzzard will alternately give a clinical lecture at the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, on Thursday in each week till Christmas. Dr. Jackson will deliver the first on November 13th, at five o'clock.

SURGEON-MAJOR W. CREYK, Army Medical Department, has been ordered to Glasgow to superintend and instruct classes of Volunteers in ambulance and stretcher drill, on the same principles which have been so successful with the metropolitan corps.

THE JERSEY FEMALE ORPHANS' HOME.

THIS Home is situated in the country parish of Grouville, about three miles from the town of St. Helier. It stands in a depression on a tract of low-lying ground, and is about three hundred feet from the nearest house. The subsoil consists of about twenty feet of stiff sandy clay, below which is sand for a depth of about three feet and a half, and underneath the sand is from three to four feet of gravel, which rests on hard rock, most probably granite. The building itself was originally a farmhouse, to which extensive additions have been made. It consists essentially of two blocks of building, one behind the other, and connected at one end, one part being two storeys and the other three storeys high. There are thirteen dormitories, containing in all 115 beds, besides accommodation for the matron and some of the attendants. There is one large room used as a school-room, and two smaller rooms, one of which is the day nursery, and the other the infant school or work-room. Another room, called the bazaar-room, is sometimes used as a dormitory; and on the ground-floor, slightly separated

from the rest of the lower part of the building, is a room of from 800 to 900 cubic feet in area, which has been used for isolating infectious cases. According to measurements made by Mr. Le Coran, the States architect, the total cubic space in the dormitories is 44,474 cubic feet, which gives an average of 386·7 cubic feet for each of the 115 beds, without any deduction being made for furniture, beds, bedding, &c. The dormitories, as well as the other rooms, are very imperfectly ventilated; some of them are dark; and, even after the children had left them for some weeks, one or two of them, notably the night nursery, smelt disagreeably.

Earth-closets were introduced some two years ago, and are used by the majority of the children. These closets are situated in an outhouse adjoining the washhouse, and the urinals connected with the main building by a covered passage. The earth used is the sandy clay of the neighbourhood—an excellent material, but it is mixed with cinders and coal ashes, and is not dried by artificial heat. When these closets are emptied their contents are thrown into an ash-pit close by, which is cleared out only at long intervals. The last occasion was during the epidemic of enteric fever. There is also another heap in a field just outside the wall of the ash-pit. The urinals are basins like those of water-closets, with perforated zinc bottoms, to prevent pieces passing into the drain, as the children frequently defecate into them. Until the beginning of June the urine from these urinals, along with the waste water from the adjoining wash-house, drained into an old hole in the earth, denominated a cesspool. This pit, which had been used as a cesspool before the earth closets were introduced, was six feet deep, and consequently about fourteen feet above the water-bearing stratum of sand and gravel, and it was neither built round nor cemented. From this pit an overflow pipe led into a newer cesspool, built of stone, which is about 110 feet from the building, and still further from the old well. This cesspool was pumped out about every three months, and the contents carted away. It is said to have been cemented, but this seems to be rather doubtful. Inside the building are two water-closets, which drain into the cesspool just mentioned. Their common soil-pipe is said not to be disconnected by a trap from the drain leading to the cesspool, and neither the soil-pipe, the drain, nor the cesspool is ventilated. Outside the door of the upper water-closet, and close to the door of two of the dormitories, is a hand-basin, with an untrapped waste-pipe leading into the soil-pipe of the closet. All the sink waste-pipes, those from the rain-water cisterns, and that from a gully-trap in the yard, drain into a small brook which runs along the bottom of the garden, about 112 feet from the front of the house. Until the 31st of May the water-supply was drawn from an old well, which was from 22 to 30 feet distant from the nearest part of the building, and 60 feet from the old unbuilt, uncemented cesspool. This well was about 20 feet deep, and just reached the sand at the bottom of the clay. In December, 1878, it was cleared out and cemented, as the water had been noticed to be turbid.

At the beginning of May there were 150 persons in the Home, 140 of them being children of all ages, and the rest the staff and some girls, former inmates of the Home, who were out of place. At this time, therefore, the overcrowding was greater than that shown by the 115 beds in the house. On the 19th of May, when the medical officer visited the institution, he found three girls suffering from enteric fever; and from this date until the beginning of September, when the epidemic died out, there were 47 cases and 6 deaths. Another child died later from phthisis, who had been one of the cases. The epidemic did not break out in any particular dormitory, each of the first three cases being in a different room, and children of all ages were attacked, though there were only two or three under five years. As soon as the disease appeared Dr. Le Rossignol, the medical officer, recommended that the water should be well boiled before using, or that rain water, or water from another source, should be used. He also advised that the water from the well should be analysed, and an analysis was accordingly made by Mr. Morgan, science master at Victoria College, with the following result[1]:—

	Parts per million.
Total solids	1378
Chlorine	326·6
N as nitrates	26
O of K MnO consumed	0·186

[1] Chemical News, August 29th, 1879.

Dissolved gases per litre CO_2 58 cc., O 4 cc., N 15 cc. Mr. Morgan also remarked that when kept for a few days the water acquired an unpleasant odour, and that when this was made more sensible by heat it resembled the smell of putrid urine. In consequence of this report the use of the well-water was forbidden on May 31st, and rain-water was used instead.

In July, after one or two borings, which yielded distinctly bad water, a tube well was sunk in an orchard adjoining the Home, about 300 ft. from the old cesspool, and 350 ft. from the old well, but even from this the water was not satisfactory. About the same time the old cesspool was filled up, and the drain entering it from the urinal and the washhouse was joined to the overflow-pipe, so that these now drain directly into the newer stone-built cesspool already mentioned.

On August 5th a child was brought into the Home which on the 10th showed symptoms of measles. It was immediately isolated, as far as possible, but two other children were allowed to assist in nursing it, one of whom took the disease on the 19th or 20th. After this the disease spread rapidly, and up to the middle of September, when it died out, there were 51 cases and 11 deaths. During both epidemics the nursing seems to have been very deficient. The only nurses appear to have been the matron, one or two girls out of place staying at the Home, and an old woman engaged during the epidemic of measles, assisted by some of the elder children. Dr. Le Rossignol repeatedly urged the necessity of obtaining skilled nurses, but it was not till the epidemics had nearly ceased that one professional nurse was brought over from London. When the epidemics came to an end the convalescents and most of the other children were sent to some empty barracks at Rozel, on the north coast of the island, from which they have only recently returned.

At about the middle of September the medical officer sent in a report on the outbreaks to the committee of the institution, in which he also pointed out the sanitary defects of the Home, and complained of the want of proper nurses. At about the same time the sanitary committee of the States appointed a commission to inquire into the causes of the epidemics, the members being Dr. Le Cromer, and Messrs. A. Godfray and H. C. Taylor. At the end of the month the committee of the Home requested Drs. Morison and Dunlop, along with Dr. Le Rossignol to examine the place and advise as to the best mode of remedying its sanitary defects. The report of Drs. Morison and Dunlop has not yet been made public, but the reports of Dr. Le Rossignol and of the States commission are on the point of publication, along with a supplementary report on the water from the new well by Mr. Taylor, and various documents connected with the affair. It is believed that the States commission pointed out the sanitary defects above mentioned, that Mr. Taylor distinctly condemned the water from the new well, and that the commission complained of the nursing, and thought the diet insufficient. They are said to have recommended that more cubic space should be allotted to each inmate, and that the dormitories should be properly ventilated. They also advised thorough cementing of the new cesspool, and more care in the management of the earth-closets and urinals. A separate building for the isolation of infectious cases was also advised. A more clear and correct idea of its contents, however, will shortly be obtainable from the report itself.

The date at which the producing cause of the enteric fever became active is pretty accurately fixed by the suddenness of the outbreak, but perhaps still more so by the case of a girl who returned from service to the Home on April 28th, and left it again for another place on May 8th, from which latter place she returned suffering from enteric fever on the 23rd, at which time there were three other cases in the Home. She was in perfectly good health until about five days before her return to the Home. Why the disease should have broken out at this precise time is not so apparent. The subsoil must have been saturated with organic matter from the old cesspool, and the well contaminated, latterly especially by urinary matters, for years past. Yet for at least over ten years there had been no epidemic of typhoid at the Home, nor had there even been any well-marked cases of the disease. Some years before this time there had been an epidemic of "low fever," but, whatever the disease may have been, it was of a mild character and no children died. It is to be noted, however, that when the well was cemented in December last it was pumped out,

and this must have been followed by a strong flow of water from the filth polluted water-bearing stratum. Also, after a high rainfall in January and February, little rain fell in March and April, so that the water entering the well during those two latter months must have been highly charged with organic matter. At that time also the ground water must have been falling.

It is to be noticed that the epidemic continued after the well was closed, on May 31st, and even after the pipe was removed and attached to the new well in July. There is indeed a case in the Home now in a girl who left for Rozel on September 10th, and returned ill on October 11th. Since May 31st, however, up to the present time rain water has been largely used for drinking purposes, and it was found a few days ago that the overflow-pipe of one of the cisterns, instead of leading into the brook, terminated in the subsoil not half way to it. No trace of introduction could be found, so far as evidence could be obtained. The milk was obtained from one farmer, and there had been no illness at his house nor amongst his servants. The new inmates received into the house during April and the beginning of May were all in good health, and continued well. The only possibility is that it may have been introduced by a visitor, but it is not easy at this date to collect reliable evidence on this point. The water seems to be the most likely vehicle by which the disease was conveyed, for the disease did not first occur in nor principally affect the dormitories more exposed to the influence of sewage gas—viz., those next the upper water-closet. Gases escaping by the urinals are not so likely to have acted as carriers, inasmuch as the urinals were separated by a passage from that part of the building which contains the dormitories. The emanations from the ash-pit and heap, containing the clearings from the earth-closets, may possibly have had an effect.

It is to be remarked that this outbreak was the first indication that there was any amount of enteric fever in the island. During the month of June a few cases occurred, there were more in July, and since August the disease has been very prevalent, the cases being in various parts of the town, and scattered all over the country in isolated houses. This is the usual manner in which an epidemic of enteric fever shows itself in Jersey; first a few cases here and there, and then a burst of the disease all over the island, with simultaneous cases in widely separated hamlets and houses between which there is no bond of connexion.

The States having taken the matter up, there is a good prospect of many needed improvements being carried out at the Home, not only in its sanitary condition, but also in its arrangement and management. The committee of the Home have at present the recommendations of Drs. Morison and Dunlop under consideration. More cubic space and better ventilation, with sufficient and suitable means for the isolation of infectious cases, are urgently required. The closets and their refuse and the urinals want better management, and the drains require proper trapping and ventilation. It is possible that the Home may be placed under the supervision of the States, a Bill embodying this suggestion having been brought forward by Deputy Durell.

Correspondence.

"Audi alteram partem."

THE STATE OF THE UTERUS IN PLACENTA PRÆVIA.

To the Editor of THE LANCET.

SIR,—A clinical observation by Dr. Roper must command attention. His statement that the cervix uteri undergoes "a peculiar induration" in cases of placenta prævia is especially interesting. It is in the highest degree important to dispel the old pertinacious and pernicious error that in these cases "the cervix is always dilated or dilatable." Dr. Roper's observations should help to dispel it.

But I must be permitted to call attention to the fact that in my "Obstetric operations" I have emphatically pointed out that the cervix in these cases is often rigid and unyielding. The following passage will be found in all the three editions of this work:—"So imperious is the dogma of unavoidable persistent hæmorrhage, that the difficulty presented by an undilated os uteri is overcome by a special hypothesis, which assumes that in these cases of flooding the os uteri is by the flooding always rendered easily dilatable. Unfortunately this is not true. Proofs of laceration, of fatal traumatic hæmorrhage from the injured cervix, as the penalty of forcing the hand through the presumed dilatable cervix abound." And to immediate injury must be added the subsequent danger of septicæmia and metritis.

In so far as Dr. Roper's observations of indurated cervix in cases of placenta prævia support the view that this induration is of pathological import, they are, as far as I know, original. But I am inclined to think that the change is physiological in its nature, being pathological only as occurring in an abnormal situation. The gestation is in a physiological sense ectopic. The lower zone of the uterus proper is not so well adapted for the development of the placenta as are the fundal and equatorial zones. But the changes wrought in the placental seat are similar in kind. There is an enormous ectasia of the vessels, and concurrently two conditions ensue. First, some amount of transudation from the vascular channels—anatomically they are channels rather than vessels—into the proper tissues of the uterine wall takes place; some of the transuded serum remains fluid, some condenses or becomes the source of hyperplasia, and thus the uterine wall is not only greatly swollen by the expansion of the vessels by the growth and infiltration of tissues, but it may be hardened by the condensation of effused serum. Secondly, owing to the large proportion of fibrin in the blood, and to the comparative slowness of its movement in the containing reticulated channels, there is a disposition to fibrinous deposits or thromboses in these channels. These changes are observed wheresoever the placenta is attached. They are more marked in the lower zone when the placenta grows there; and these conditions extend to the cervix proper as coming within the range of the exalted action going on in the lower segment of the uterus.

There is a third special cause operating in this region. It is that in many cases—and the remark applies more forcibly to the central implantation cases—the area of growth of the placenta is more limited than when the placenta grows to the fundus or sides of the uterus. The lower zone, even when the placenta grows to it, is of smaller superficies, the placental structure is generally more concentrated, it is smaller in circumference and thicker. Hence there is greater development of uterine vessels at the corresponding site, greater thickness of uterine wall.

Another common cause of rigidity of the cervix in these cases is that, the labour coming on prematurely, the uterus is taken by surprise before its tissues have attained the development necessary for the easy accomplishment of delivery. The child's small and immature head impinging on the intervening placenta, or often giving place to the shoulder or breech, the natural agent of expansion is wanting.

The lesson to be derived from these anatomical and physiological facts, enforced as it is by clinical experience, is to distrust the old practice of the *accouchement forcé*. It is unscientific, violent—one might say brutal—and dangerous. We must adopt methods more rational and more safe. We must give time for the cervix to expand; remove the obstacle to its expansion which the adhesion of the placenta over the os internum presents by detaching it from this region, expand it gently by water-pressure if need be, not deliver until the parts are fairly dilated; and, if turning be indicated, to accomplish this by the bipolar method, which renders the introduction of the hand unnecessary.

Your obedient servant,

Harley-street, Oct. 1879. ROBERT BARNES.

PLEURAL AND DIAPHRAGMATIC TENSION.

To the Editor of THE LANCET.

SIR,—In the letter you did me the honour to publish on the 25th ult., if I failed to convey the gist of his highly suggestive communication, I must ask Dr. Neale to accept my assurance that I had at least endeavoured to grasp his meaning.

When I wrote that rupture of air-vesicles "might occasion pneumothorax," I had not forgotten that the pleural covering must first give way. My words imply a chain of accidents, and according to Watson (Lectures, vol. ii., p. 189), this particular link is not always wanting. Further, I had

not forgotten, but never accepted as sterling, "the fact that communications exist in the mediastinal spaces, by means of which air from ruptured vesicles may pass into the cellular tissue of the neck." I had never been able to trace them, and could find no author who had, but I now believe that such channels are occasionally formed, for in Laennec's Treatise on the Diseases of the Chest and on Mediate Auscultation I have met with such a description of the condition, on the authority of his own observations, as has dispelled every doubt; whilst at the same time my scepticism is justified by his preliminary statement, that "The texture of the cellular partitions separating these lobules from each other is so compact that I doubted, a few years ago, the possibility of an infiltration of air within their substance." (Forbes' translation, 4th edition, page 158.)

In support of my charge of general inaccuracy in dealing with the subject of respiration in its physical aspects, will you kindly grant me space for one more quotation, which shows that we are not even agreed as to what is or is not a muscle of inspiration. "Its [pulmonary emphysema] production is mechanical, and occurs from the forcible compression of the air in the lungs, which is effected by the diaphragm and other expiratory muscles, whilst an obstacle exists to the egress of the air." (Reynolds' System of Medicine, article Whooping-cough.)

I remain, Sir, yours truly,

WM. M'LAURIN, M.B., C.M. (Glasgow.)

Islington, Nov. 2nd, 1879.

WORKHOUSE INFIRMARIES AS FIELDS FOR MEDICAL STUDY.

To the Editor of THE LANCET.

SIR,—I notice in the *New Quarterly Magazine* for this month a very good article, entitled "Workhouse Visiting and Management during Twenty-five Years." Amongst the improvement and reforms suggested for sick asylums and infirmaries is this, that a slight alteration should be made in Mr. Gathorne Hardy's valuable Act, passed in 1867, and these institutions opened to medical students for the *clinical* study of disease.

"It is proposed that students of third and fourth years should be admitted, as the larger institutions abound with interesting cases; and how valuable the assistance of these young men would be we need hardly urge, when we find as many as five hundred patients are sometimes placed under the care of two medical men."

If this change were effected it would not only be advantageous to the sick poor, but would also make these institutions serviceable for the study of disease, and indirectly a benefit to the public.

These sick infirmaries are full of cases which are met with in private practice, but are never seen at a hospital.

The time squandered by students and clinical clerks struggling to see, and hopelessly trying to get near a bed, during the rounds of one of the visiting staff to our London hospitals, would be far more profitably spent watching and observing disease in the roomy wards of the large London sick asylums, their visits of course being regulated under the direction and rules of the medical superintendent.

The field of pathological study in these places can be best realised by a glance at the Pathological and other medical societies' reports for the past few years.

Further, these institutions, when under proper management, are admirably suited for the training of nurses; and there are numbers of women who would gladly avail themselves of these advantages if facilities were offered them.

I am, Sir, yours faithfully,

SAMUEL BENTON.

Bennett-street, St. James's, S.W., 29th Oct., 1879.

USE OF CONTINUOUS ELASTIC PRESSURE IN SURGICAL PRACTICE.

To the Editor of THE LANCET.

SIR,—In addition to what I said in THE LANCET of last week, I should like to indicate briefly three other operations in which I have found the conical dilators of great service. These are, the induction of premature labour, which was recently done under my directions by the house-surgeon of our hospital, in a case of placenta prævia; the treatment of uterine dysmenorrhœa, by slight notching of the cervix and the use of No. 1 dilator for an hour a day, continued for a fortnight; and the treatment of stricture of the rectum.

I would suggest its extension to the treatment of stricture of the urethra and of the lachrymal duct by some surgeons in whose practice such cases occur.—I am, &c.,

Birmingham. LAWSON TAIT.

PARIS.

(From our own Correspondent.)

THE last number of the *Gazette Médicale de Paris* contains an account of five cases of paralysis cured by the external application of magnets. In one of these the disease was the result of lead-poisoning, and in another it followed upon an attack of epilepsy. In a third instance the patient, a woman aged sixty-seven, had been seized with apoplexy in May, 1878; from this she recovered without any motor or sensory disturbance, but remained aphasic. Last April she came under observation at the Hôtel Dieu with symptoms of ulcer of the stomach. Whilst there, after an attack of giddiness, the limbs became contracted, and complete right hemianæsthesia developed. The application of a magnet dissipated these troubles, and the patient then left the hospital. The recurrence of gastric symptoms brought her back a few days later, when another attack of apoplexy occurred, which left the patient anæsthetic, choreic, contractured, and paresic, all on the right side. According to the physicians, this was evidently an example of post-paralytic hemichorea and hemianæsthesia, clearly depending upon a thrombus located in the posterior third of the external capsule. Here again the action of magnetism was most beautifully demonstrated, its application for one hour sufficing to effect a cure. MM. Proust and Ballet made a communication upon the same subject to the congress at Amsterdam; and, like most observers in this field, they relate some new and astonishing discoveries. These are duly chronicled in the *Paris Médical*. When a metal is applied in a case of anæsthesia the sensibility first returns at the seat of application; but when magnets are used, wherever they may be placed, their action begins at the thorax and extends to the periphery. Those who *manage* to obtain results with metals have described a transfer of sensibility which occurs during their application. MM. Proust and Ballet prevent this by applying a magnet (in a case of anæsthesia) to the insensible side, but *towards* the sound half of the body. When this little detail is observed sensibility returns on the side of application without disappearing on the opposite side. In one of their patients suffering from cerebral tumour and hemianæsthetic, a magnet restored feeling on the affected side, but caused spinal epilepsy on the other. These observers also find that when two patients join hands, the action of the magnet applied to one passes through to the other. When, however, hysterical subjects are chosen, the *phenomène de transfert* does not occur in the person to whom the magnet is applied. Some of these experiments, related to show the physico-vital action of magnets in disease, forcibly suggest the possibility of their giving rise to psychical disturbance in the healthy. If a magnet acts *à distance* there is no reason why it should not influence the experimenter as well as the subject—and an experimenter with disturbed hemispheres might observe that which is not obvious to others. This perhaps may account for the discordance of the results obtained in these matters by different observers.

M. Paul Bert's gaseous mixture for the induction of anæsthesia is now being used in two of the Paris hospitals, on Tuesday at Lariboisière by M. Labbé, and on Thursday at St. Louis by M. Péan. A few days ago it was administered during an operation which lasted over an hour.

THE ravages of the epidemic of "spotted fever," so-called, at Cape Clear continue to extend. On Saturday there were one hundred cases on the island, and many of the inhabitants had left the place. Sir Henry Wrixen Beecher, the landlord, has had a temporary hospital erected at the place, and the Local Government Board inspector, Dr. Brodie, has proceeded to the locality to make arrangements for isolating the infected.

Obituary.

DR. AMÉDÉE DEVILLE.

The Times of October the 29th records briefly the death of Dr. Amédée Deville in the Ivry Lunatic Asylum, of which, it says, he had been an inmate seventeen years. He is noticed as a skilful surgeon and as a Professor at the Faculty of Medicine, who on the *coup d'état* of 1851 was arrested and condemned to transportation to Cayenne, though he had taken no part in resisting the usurpation. His father, a Republican deputy, was known and was in prison for complicity in the rising of 1849, and his friends—continues the report—with great difficulty obtained a commutation of his sentence to simple banishment. He lived several years in London in straitened circumstances, devoting himself to medical studies, and ultimately practising medicine with much success. This, according to the *Temps*, did not calm his mind. The recollection of his persecutions preyed upon him, and feeling himself watched by French detectives, the most trivial occurrences seemed to him indications of fresh persecutions, so that in 1861 he for ever lost his reason, whereupon his relatives took him over to Ivry.

The above extract conveys, in a few words, a correct general outline of the career of one of the most remarkable men who in this century has found a place in the ranks of medicine, and who, under happier circumstances, would most probably have left more than one great chapter in medical science and art. Deville's father had been a leader of the Radical party in France during the stormy days of 1848-9, and had committed, as his son told the writer, a particular offence against one of the persons then in temporary power which could never be forgiven. But the son, the subject of the present notice, was not in the slightest degree implicated, and his banishment to Cayenne was simply a merciless iniquity. He was taken from pursuits in the Faculty of Medicine, which he was made to adorn, and to which his whole heart was devoted. He was treated as a common felon. Without a word in defence he was sent to Cayenne, and after he was allowed to come to England he was under constant surveillance from the French police. It is no wonder that his powerful mind at last went wrong. Soon after Deville arrived here he was "discovered" by the late Dr. Lankester, who had a keen appreciation of men of talent and an earnest love of liberty. Lankester admired the talent of the man, sympathised with his misfortunes, and asked his colleagues of the old Grosvenor-place School of Medicine to take him as lecturer on anatomy and demonstrator of operative surgery. The request was granted, and Deville for many years taught anatomy and operative surgery in London with an enthusiasm which carried all before it. He was in every sense a great teacher, rivalling the teachers even of the old times. His knowledge of his subject was faultless, his industry intense, and his method so clear, incisive, and precise, the students seemed to learn from him without an effort. While engaged in teaching he was also equally engaged in learning, the nervous system being his great subject of research. During one session he dissected out with the utmost nicety the sympathetic nervous system, and on the slate in the dissecting-room traced out this system with such exactitude that a copy of the drawing was perhaps the most perfect outline that was ever furnished until the art of photography came in to the assistance of the anatomist. Nothing could prevent Deville from following out his work except the extremest physical exhaustion. One day, as the present writer was coming out of the lecture theatre, he met Deville entering the school, with the right eyelid drooping and quite paralysed. "What is the matter, Deville?" "Matter (with a shrug), that abominable right motor oculi is playing me false, like everyone else." "Had you not better give up your lecture, and rest?" "What! give up my lecture? No, Sir; but you come with me, if you are the friend, into my little room, and stick that abominable lid up for me, if you can, with a bit of plaister." The wish was carried out, and in this way the lecture was given, as if nothing had occurred. For some days afterwards he continued in the same condition, refusing to subject himself to any treatment, and only answering,—with tremendous emphasis,—when the question was put as to the cause of the paralysis, "Napoleon le petit, the rascal, and his spies." From this attack he seemed to recover physically, but soon afterwards his mind became more irritable. He was suspicious of everything and almost everybody, and during some riots that occurred one Sunday in Hyde Park he was so unmanageable that but for a little friendly suasion he would have gone in "for the people with a vengeance." He took a dislike, in time, to certain of his friends, especially his oldest English friend in London, Dr. Lankester. He had some inveterate pique against the College of Surgeons, and at last he became so extreme that it was no little relief to the Dean of the School to receive his resignation. Finally his mind went altogether, and for years he remained incurable, so that death may truly be spoken of, in his case, as a happy release.

Working daily with Amédée Deville for several years, knowing him well, and having had the best opportunity of reading his character in its various lights and shades, the writer of this notice cannot do less than bear witness to his real worth and incomparable talent. He was a man of great physical strength; short, thick-set, broad-shouldered; with a magnificent head, dark complexion, and piercing eyes. By a strange irony, he resembled, in figure and expression, the founder of the family that oppressed him, Napoleon the First. He was by nature endowed with genius and goodness, both perverted and ruined by the strife and animosity to which, from no fault of his own, he was exposed. Had he lived in a period when the arts of learning and peace were prominent, his intense energy expended on them would have yielded to mankind a splendid benefaction, and would have crystallised him amongst the many illustrious of France whom Frenchmen worship, perhaps with too much of national idolatry, and whom the world, though after ages, recognise with admiration and affection.—*Communicated.*

THOMAS RICHARDSON COLLEDGE, M.D., F.R.S.E.

DR. COLLEDGE died on the 28th of October at Lauriston-house, Cheltenham, in the 83rd year of his age. He was a pupil of Sir Astley Cooper, and entered upon his profession sixty-two years ago; nor did he wholly relinquish his practice until 1878. To him during his practice in Canton and Macao belongs the merit of originating the first infirmary for the indigent Chinese, which was called, after him, "Colledge's Ophthalmic Hospital." He was also the founder of the Medical Missionary Society in China, and continued to be president of that society to the time of his death, a period of forty-two years. He laboured in Canton and Macao for more than twenty years, first under the Hon. East India Company and then under the Crown as surgeon to His Majesty's Superintendents. On the abolition of the office he had held and his consequent return to England, deep regret was expressed by the whole community, European and native, and a memorial of his services was addressed to her Majesty the Queen in 1838 by the Portuguese of the neighbouring settlement of Macao. Lord Palmerston, in recognition of his services and merit, thought it right to award him an annuity. Dr. Colledge took the degree of M.D. in 1839, and became F.R.C.P. of Edinburgh in 1840 and F.R.S. of Edinburgh in 1844. The last thirty-eight years of his life were spent in Cheltenham, where he won universal esteem by his courtesy and skill.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Members of the College on Oct. 30th:—

Henderson, G. Courtenay, M.B. Lond., Univ. Coll. Hosp.
Smith, W. Wilberforce, M.D. Heidelberg, Eastbourne-terrace.

On the same day the following gentlemen were admitted Licentiates of the College:—

Ashby, Thomas Harry, M.B. Toronto, Cheltenham.
Ballance, Charles Alfred, Stanley House, Lower Clapton.
Bradford, Cordley, Smethwick, Birmingham.
Butler, Gamaliel Henry, Westminster Hospital.
Campbell, Robert Huntley, Gilling Rectory, York.
Dalgado, Daniel Gelasio, Palace-road, Lambeth.
Da Silva, Pascoal Manoel, Bombay, India.
Fischer, Carl, M.D., Würzburg, Gower-street.
Fisher, Frederick Baxley, Queen's-road, Clapham-park
Gofton, Joseph Edward, Borough-road, North Shields.
Greenwood, Fredk. Stowell, M.D. M'Gill, Kennington-road.

Howell, Thomas Arthur Ives, Old Vicarage, Wandsworth.
Lithgow, Thomas George, Farnborough Station.
Robinson, George Somerville, Claverton-terrace.
Sheild, Arthur Marmaduke, Warwick-street.
Smith, Sydney, Camden-road.
Weakley, Arthur, Forest-gate.
Wright, John Wellington, M.D. M'Gill, Kennington-road.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 30th :—

Crew, William Thomas, Park-lane, Macclesfield.
Breese, Thomas Thwaites, The Precincts, Norwich.

The following gentlemen on the same day passed the Primary Professional Examination :—

Benjamin Pope Bartlett, Guy's Hospital ; Herbert Clatworthy, London Hospital ; Charles Henry Daniell and Owen Pritchard, St. Bartholomew's Hospital ; Charles Rout, Charing-cross Hospital.

DR. ANDREW DUNCAN, F.R.C.S., is said to be recovering from the severe wounds he received before Cabul.

MR. OLIVER PEMBERTON has been elected a member of the Town Council, after a contested election, by a large majority of votes.

DR. SHELOCK, Medical Superintendent of the Worcester Lunatic Asylum, and his wife, have been presented with a very handsome claret jug and an illuminated address, on the occasion of their silver wedding-day.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—The next quarterly meeting of this Association will be held at 53, Berners-street, W., on Wednesday, the 12th November, at 8.30 P.M. Dr. Wilkie Burman will read a paper, "On the Separate Care and Treatment of Acute and Curable Cases in Asylums : with Proposals and Suggestions for a Detached Hospital, for special purposes, in connexion with every large Public Lunatic Asylum." After which Dr. Hack Tuke will exhibit "a Brain preserved by Giacomini's method."

PROFESSOR OWEN.—On Wednesday the Company of Leathersellers presented the freedom of their guild to Professor Owen. It was contained in a beautiful silver-mounted and inscribed box made of hippopotamus leather, which had taken three years in tanning. In making the presentation the Master of the Company, Mr. Viney, said he could understand something of the fascination experienced by men who devoted themselves to a study of a particular branch of science, but apart from the intense interest of such pursuits, intensifying with every step, he could not but feel that there was yet a higher and profounder gratification to a benevolent mind in the assurance that untold benefits to mankind were superadded by all the refined pleasure which a student life could yield. Having expressed a hope for the future happiness and continued success of Professor Owen, the Master extended the right hand of fellowship upon his admission to the honorary freedom of the company. Professor Owen, who had been introduced to the Court by Alderman Staples and Mr. W. W. Lee, then signed the roll of honorary freedom and suitably acknowledged the gift. Dinner followed.

Medical Appointments.

BELFIELD, C. W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the No. 2 South District of the Barton-Regis Union, vice Day, deceased.

BERRY, F. H., M.R.C.S.E., has been appointed Junior House-Physician to Guy's Hospital, for November.

CASLEY, R. K., M.D., has been appointed Honorary Physician to the East Suffolk and Ipswich Hospital, vice Durrant, resigned.

CHISHOLM, J. M., M.A., M.B., C.M., M.R.C.S.E., has been appointed Resident Surgeon, University Clinical Wards, Royal Infirmary, Edinburgh, vice Dick, whose term of office has expired.

CLOUSTON, J., M.B., C.M., has been appointed Medical Officer to the Medical Aid Association of the Parishes of Birsay, Harray, and Sandwick, Orkney.

DALTON, N., M.R.C.S., L.S.A.L., has been appointed Physician's Assistant to King's College Hospital.

DAVIDSON, J., M.R.C.S., L.S.A.L., has been appointed a House-Surgeon to King's College Hospital.

ELLIS, J. Lloyd, L.K.Q.C.P.I. & L.M., has been reappointed Medical Officer of Health for the Mallwyd Sub-district of the Dolgelly Rural Sanitary District, at £7 for one year.

FLANAGAN, H. E. B., M.R.C.S.E., L.S.A.L., has been appointed Senior Obstetric Assistant to Guy's Hospital, for November.

FULLER, T. W., M.R.C.S.E., has been appointed Second House-Physician to Guy's Hospital, for November.

GRACE, W. G., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the No. 2 North District of the Barton-Regis Union, vice Day, deceased.

HIGHET, J., M.B., L.F.P.S.G., L.M., has been appointed by the Board of Trade Medical Inspector of Seamen for the Port of Troon, Ayrshire, N.B., vice Reid, deceased.

HUTCHISON, G. W., M.D., M.R.C.P.E., has been appointed Medical Officer for the Chipping Norton Workhouse, vice Farwell, deceased.

JACKSON, M., M.R.C.S.E. & L.S.A.L., has been appointed Medical Officer for the No. 2 District of the Chipping Norton Union, vice Farwell, deceased.

JONES, E., M.D., M.R.C.S.E., has been reappointed Medical Officer of Health for the Dolgelly Sub-district of the Dolgelly Rural Sanitary District, at £9 for one year.

JONES, J. Wonlkes, L.R.C.P.Ed., L.F.P.S.G., has been reappointed Medical Officer of Health for the Llanegryn Sub-district of the Dolgelly Rural Sanitary District, at £9 for one year.

JONES, J. T., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Talyllyn Sub-district of the Dolgelly Rural Sanitary District, at £7 for one year.

LLOYD, H. J., L.R.C.P.Ed., L.F.P.S.G., has been reappointed Medical Officer of Health for the Llanaber Sub-district of the Dolgelly Rural Sanitary District, at £7 for one year.

LOVEROCK, R. G., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Termon Dispensary District of the Ballieborough Union, co. Cavan, vice Lough, resigned.

LYON, Dr. J. A., has been appointed Medical Officer and Public Vaccinator for the Parish of St. Andrew's, Fifeshire, vice Malcolm, deceased.

MCALPINE, A. N., B.Sc., has been appointed Lecturer on Botany at the Minto House School of Medicine, Edinburgh.

MCDONNELL, D., M.R.C.S., has been appointed Assistant House-Physician to King's College Hospital.

MANSELL, E. R., M.R.C.S.E., has been appointed Junior House-Surgeon to Guy's Hospital, for November.

NEWMARCH, B. T., M.R.C.S., has been appointed a House-Surgeon to King's College Hospital.

OLIVER, T., M.B., has been appointed Lecturer on Practical Physiology in the University of Durham College of Medicine, Newcastle-on-Tyne.

PENNY, E., M.R.C.S.E., L.S.A.L., has been appointed Senior House-Surgeon to Guy's Hospital, for November.

PHILLIPS, J., B.A., M.R.C.S., has been appointed Assistant House-Surgeon to King's College Hospital.

POLAND, J., M.R.C.S.E., L.R.C.P., has been appointed Second House-Surgeon to Guy's Hospital, for November.

SILK, T. F. W., L.S.A.L., has been appointed Physician-Accoucheur's Assistant to King's College Hospital.

SWEETING, R. D. R., M.R.C.S.E., L.S.A.L., has been appointed House-Physician to the London Hospital.

THEED, W. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Aylestone-road Branch of the Leicester Provident Dispensary.

WILLIAMS, P. St. G., M.R.C.S., has been appointed Assistant House-Surgeon to the Huddersfield Infirmary, vice Greenish, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ARMSTRONG.—On the 2nd inst., at Parrock-street, Gravesend, the wife of John Christopher Armstrong, M.R.C.S.E., of a daughter.

BUCKLEY.—On the 2nd inst., at Stonewall-terrace, Cheetham-hill, Manchester, the wife of Samuel Buckley, F.R.C.S.E., of a daughter.

DEMPSEY.—On the 2nd inst., at Charterhouse-square, the wife of Meldon Dempsey, M.D., of a son.

DICKSON.—On the 1st inst., at Beeford, Yorkshire, the wife of John Dickson, M.B., L.R.C.S.Ed., of a son.

RENWICK.—On September 4th, at Nagasaki, Japan, the wife of William Renwick, L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., of a son.

RUTHERFORD.—On the 2nd inst., at Woodilee, Lenzie, the wife of James Rutherford, M.D., of a daughter.

WILLIAMS.—On the 2nd inst., at Sutherland Villas, Gauden-road, Clapham, S.W., the wife of A. H. Williams, M.B., M.R.C.S., Surgeon H.M. Bengal Medical Department, of a daughter.

MARRIAGES.

CARLETON—CARTER.—On the 29th ult., at St. Peter's, Newnham, John Shaw Carleton, L.K.Q.C.P.I., to Rose Ann, daughter of M. F. Carter, Esq.

MORGAN—CARTER.—On the 30th ult., at St. John's, Penge, S.E., by the Rev. — McAnally, A. Kinsey Morgan, M.R.C.S.E., to Annie Isabel, youngest daughter of the late Hodges R. Carter, Esq., Q.C., of Holmesdale, Penge lane, London, S.E.

DEATHS.

CLAPHAM.—On the 11th ult., at Astoria, New York, Edward Clapham, M.D.

COLLEDGE.—On the 28th ult., at Cheltenham, Thomas Richardson Colledge, M.D., aged 82.

CONNOR.—On the 31st ult., at Knockmaroon, St. John's-hill, New Wandsworth, William Connor, M.A., M.B., F.R.C.S.I., aged 75.

DAVIDSON.—On the 31st ult., at Shaftesbury House, Bayswater, Dr. Thomas Davidson, aged 77.

DAWSON.—On the 28th ult., at Thames Ditton, John Dawson, M.R.C.S.E., aged 72.

SCOTT.—On the 29th ult., at Bryn, Conway, William Joseph Scott, M.R.C.S.E., aged 32.

SHORT.—On the 1st inst., at Beech Lodge, Harrogate, William Short, L.F.P.S.G.

TORNEY.—On the 1st inst., at Ellis's Quay, Dublin, Richard Torney, L.R.C.P.Ed., aged 43.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Nov. 6th, 1879.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 31	30·23	E.	50	46	..	51	47	..	Overcast
Nov. 1	30·05	N.	47	45	..	49	45	..	Foggy
,, 2	30·15	E.	41	39	..	45	33	..	Cloudy
,, 3	30·35	N.	43	41	..	49	36	..	Overcast
,, 4	30·55	N.	48	45	..	49	41	..	Overcast
,, 5	30·54	W.	47	44	..	52	44	..	Overcast
,, 6	30·56	N.W.	43	41	..	51	38	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

HYPODERMIC INJECTION OF MORPHIA.

IN a recent number we drew attention to the prevailing use of injecting morphia under the skin, and remarked that it would be well if this useful method of treatment were restricted to professional hands, as in certain cases, particularly in females, the habit becomes most insidious and dangerous. These observations bear on a case of death induced by the use of the hypodermic syringe which lately took place in Dublin, and which is of considerable interest, especially as showing the enormous quantity of morphia which can be tolerated. It appears that a governess, aged fifty-six, was subject to facial neuralgia, and, in order to alleviate the pain, had for years been in the habit of employing morphia hypodermically until she used the enormous quantity of twelve grains of morphia for one injection, her custom being when affected with the neuralgia to use twenty grains during the twenty-four hours. On the 13th ult. she was seized with illness, and soon showed symptoms of tetanus, which terminated fatally some days afterwards in Jervis-street Hospital, where she had been removed, death being caused by the irritation of one or more of the punctures occasioned by the needle of the hypodermic syringe. A coroner's inquest was held, and a verdict returned that death was the result of misadventure.

Mrs. L. M. Lattey.—The case is a grievous one; but we regret it is impossible to print the letter for want of space. Application may be made to the Secretary of the Widows and Orphans' Fund.

F.R.C.S., (Ramsgate.)—Next week.

TREATMENT OF RETAINED PLACENTA IN MISCARRIAGE.

To the Editor of THE LANCET.

SIR,—In reply to Dr. Edis's strictures on my communication of Oct. 25th, I would wish to be understood that I have not upheld "a purely negative, temporising course." I communicated the case, as I believe continued hæmorrhage, and especially septicæmia, is the exception rather than the reverse in miscarriage, and particularly so for the reason that if uterine dilatation and evacuants be employed, as was practised in my case, the extrusion of the placenta will take place sooner or later. I was fully alive to the dangerous condition of my patient during the entire period of treatment; but I think it can hardly be called "temporising" with a case if, in a widely scattered practice, the placenta be removed within three days from the commencement of labour. In the case related by Dr. Edis, where the placenta had been retained for eleven weeks, I only claim for my treatment that, had it been pursued, the *materies morbi* would have been removed without instrumental interference—a consummation not to be despised. As to the statement that professional opinion in England is by no means in accordance with the conclusions arrived at by me, my answer is, Circumstances alter the treatment of cases.

In Denman's "Obstetric Aphorisms," p. 160: "It is not now thought necessary or proper in abortions to use any means for bringing away the ovum, or any portion of it which may be retained, with instruments or manual assistance."

In Smellie's "Midwifery," as quoted by Dr. Edis, vol. ii., p. 131, it is stated: "When both fingers and blunt hook failed, flooding was restrained by opiates, and afterwards the secundines were more easily brought away, if it did not come of itself." In conclusion, to finish the paragraph Dr. Edis has quoted against me, Dr. M'Clintock says: "Although, as a general rule, prone to operating, yet his (Smellie's) large experience and correct observation had taught him that time and patience were oftentimes the best auxiliaries in these particular cases, and he points out very plainly when we may interpose our manipulations with a prospect of doing good."

I am, Sir, yours obediently,
HENRY JOHN FORSTER, L.R.C.S.I., &c.

Deeping St. James, Nov. 3rd, 1879.

CONVEYING PATIENTS TO THE WORKHOUSE.

THE Chelsea guardians have just adopted a very simple and at the same time an indispensable and useful resolution. It was resolved that henceforth when any person is brought to the workhouse or the infirmary by the police, note shall be taken of the policeman's number, and whether the patient came on foot, on a stretcher, in a cab, or an ambulance. Thus, should the case prove to be of an infectious character, it will be possible to trace the vehicle employed, and have it disinfected. If the owner of the vehicle or any other person concerned have knowingly infringed the clauses of the Sanitary Act affecting this matter, there will no longer be the same difficulties in enforcing the law. Also, if such a regulation were universally carried out, and the same notes made, whether the sick are accompanied by a policeman or not, persons conveying patients to hospitals, workhouses, and similar public institutions, would soon acquire some knowledge of the responsibilities that weigh upon them. The grievous accidents, the unnecessary exposure of small-pox and other patients, the infection of waiting-rooms intended for non-infectious cases, would be far less likely to occur if the example of the Chelsea guardians were generally followed.

ON MIRROR-WRITING.

To the Editor of THE LANCET.

SIR,—In your interesting leading article on Dr. Erlenmeyer's observations on mirror-writing or "retrography," you have opened up a subject the consideration of which may not be without good results if other observers will give the results of their experience. In adult life, when the handwriting is formed, each person has developed and maintains a certain style, so that he may be recognised by his writing as surely as by his gait in walking; nay more, many persons are enabled to decipher character by handwriting as by physiognomy. The style by habit of formation of letters and by individual idiosyncrasy becomes an involuntary act, the main characteristics of each letter becoming permanent, though varying slightly from the variety of materials used, as pencil or different sorts of pens. Let a person try to write retrographically with the right hand; the action is no longer automatic, but a determined effort of will and attention is required to produce a legible result, and the result, even when so obtained, so differs from that person's ordinary writing as to be unrecognisable. But if the left hand be used for retrographic writing, such writing is performed automatically, and the writing, moreover, bears the same characteristics as that same person's ordinary writing; whereas an attempt to write the right way with the left hand requires nearly as much mental effort at first as writing retrographically with the right. Is this phenomenon due to more or less facility of hand movement, or does its cause lie deeper, in some unilateral brain perception? To illustrate my remarks I enclose specimens.

Yours faithfully,
Portugal-street, W., Nov. 1st, 1879. HEYWOOD SMITH.

*** The examples which Dr. Heywood Smith sends strikingly confirm his statements. His abduction writing with the left hand strikingly resembles in style and freedom his ordinary hand of right-handed abduction writing; while his right-hand adduction writing and left-hand adduction writing also resemble one another. The results thus confirm the conclusions of Dr. Erlenmeyer.—ED. L.

THE LATE MR. J. C. COPLAND.

WE have been requested to publish the following:—

At a preliminary meeting held at the house of Dr. Semple on the 29th ult., it was resolved to raise a subscription to be presented to the widow of the late Mr. James Charlesworth Copland. Mr. Copland was the author of the abbreviated edition of the well-known Copland's Medical Cyclopædia, and was a nephew of that distinguished physician and lexicographer. He served as a surgeon in the Crimean war. He was afterwards a member of the Court of Examiners of the Society of Apothecaries, and was rapidly making a name in medical literature when he was attacked with an intestinal affection, and, after a few hours' illness, was cut off in the prime of life on the 18th of September last, leaving a widow and five children almost unprovided for. Dr. Semple was requested to act as Treasurer, and Mr. Arthur Norton as Secretary. The following donations were announced:—

John S. Stocker, M.D.	£10 0 0
Algernon C. W. Norton, M.D.	10 10 0
Arthur T. Norton, F.R.C.S.	5 5 0
R. H. Semple, M.D., F.R.C.P.L.	2 2 0
W. F. R. Burgess, M.D.	2 2 0
J. C. Thorowgood, M.D., F.R.C.P.L. ..	2 2 0
Stephen H. Ward, M.D., F.R.C.P.L.	2 2 0
John Randall, M.D.	1 1 0
Thomas R. Wheeler, F.R.C.S.	2 2 0
Henry Bullock, F.R.C.S.	2 2 0
Robert Fowler, M.D.	2 2 0
Charles Taylor, M.D.	2 2 0
Joseph S. Lavies, M.D.	1 1 0

Subscriptions may be forwarded to the Treasurer, 8, Torrington-square, W.C.; or to the Secretary, 6, Wimpole-street, Cavendish-square, W.

Mr. A. Morton.—Kirkes's Physiology; Gray's Anatomy; Heath's Manual (for Dissecting).

SHEPHERD MEMORIAL FUND.

WE are authorised to announce that the result of the collection for this Fund has been most satisfactory, cordial and liberal support having been given by the medical officers of the army and numbers of private friends of the late Surgeon-Major Peter Shepherd. Notwithstanding the nominal limit of subscriptions to 10s. 6d., the amount contributed has enabled the Executive Committee to adopt the following resolutions for the object in view:—(a) A marble tablet, with appropriate inscription, in Parish Church of Lochiel Cushnie, Aberdeenshire. (b) The offer of a "die" for Medal and a sum to be invested, to bring in about £6 6s. annually, to Aberdeen University, to found a "Shepherd Gold Medal" for Surgery, to be competed for each year. (c) Surplus, if any, for a "Brass" in Chapel of Royal Victoria Hospital, Netley.

NON-ARSENICAL PAPERS.

WE have been informed on excellent authority that some of the wall-papers sold as free from arsenic do in reality contain that noxious constituent. This is a grave matter, and one that deserves the careful attention of manufacturers. We would remind them that the detection of arsenic is so extremely easy that any neglect on their part is certain to be found out, and that if arsenic were found in a paper sold as free from it, awkward legal proceedings might follow.

Mr. Robt. A. Patterson.—We are not aware.

L.R.C.P. Lond.—Yes.

BOILING OF CRABS.

To the Editor of THE LANCET.

SIR,—I am sorry to notice that you say that, though boiling crabs &c. is a savage mode of preparing fish for food, no one takes up the cudgels for the poor creatures done to death by what may be hideous torture. You will see by a copy of our last report, which I send by book-post, that the matter is there mentioned; but, in fact, I have been directing attention to the matter for years past (as have also some other members of our Committee), and endeavouring to ascertain some more easy method of killing these animals. Long since the Secretary of the Royal Society ascertained for me that puncturing with a stiletto was a method by which crabs could be killed, and he has now ascertained the place where the puncture should be inflicted, and has illustrated the same in the *Animal World*. He will also cause illustrated handbills to be distributed, explaining the process. Meanwhile our branch has purchased copies of the *Animal World* containing the explanation, and the Secretary of our Ladies' Committee has undertaken to distribute them among fishmongers, and I have communicated with the Secretaries of our auxiliaries in seaport towns, who have promised to write to the newspapers in their localities, as I have also done to the newspapers in this city, though, I regret to say, some (at least) have not inserted my letters.

Yours &c.,

H. W. BOYD MACKAY,

Hon. Sec. to the Devonshire Branch of the

November, 1879. R.S.P.C.A.

SANITARY PRIMER FOR INDIA.

WE had occasion to announce a short time since that of the various manuscripts forwarded to the Government of India in competition for the prize offered for a sanitary primer adapted for use in schools, native and others, none had been held to satisfy the requirements of the Government. We now learn that, at the request of the Government, a primer has been prepared by Dr. Cuningham, the Sanitary Commissioner attached to the Government of India.

BAD USES OF UNQUALIFIED ASSISTANTS.

Practitioner.—Our correspondent complains of a practitioner who disregards the usual ethical proprieties of practice, and employs an unqualified assistant who does the same. He "believes" the practitioner supplies the said unqualified assistant with blank forms of death certificate to be filled up at discretion. If positive evidence of such behaviour can be adduced, it should be forwarded to the Registrar-General, and brought under the notice of the local coroner.

HAIR LINIMENTS.

To the Editor of THE LANCET.

SIR,—Being asked by a patient for a stimulating hair liniment, I thought I could not do better than direct that mentioned under the head of "Linimentum Crinale" in Squire's Companion to the British Pharmacopœia (page 89, eleventh edition), to be made up and forwarded. At the same time, by way of experiment, I applied some to my own head, and persuaded my unfortunate wife to follow my example. In all three cases the first application of a very small quantity of the liniment produced redness, and the second (after a day's interval) a highly successful vesication of every portion of the scalp to which it had been applied. I need not comment on the result, nor on the inconvenience and annoyance caused to me personally. The prescription was compounded by a careful chemist residing in the neighbourhood, who assures me he adhered literally to it. Perhaps some of my professional brethren might like to be warned in time.

I am, Sir, yours &c.,

G. STANLEY MURRAY, M.D.

Meadowside, Putney, Oct. 28th, 1879.

INFANTILE MORTALITY IN AUSTRALASIA.

To the Editor of THE LANCET.

SIR,—Although a layman, I venture to trouble you with a few words on this important subject, because I have lived for some time in Australia, and while settled in an upland district for some years near Ballarat I kept a careful register of the temperature.

As far as the people themselves are concerned, the chances of infant life ought to be better than in these islands. The kind of people who emigrate are usually above the average in physical vigour; they are better fed, they are less crowded together, and they do not undergo the pinching poverty so common at home. Whence, then, so unfavourable a rate of infant mortality in Australia? The cause, I venture to think, is partly due to the climate, partly to the habits of the people. I will say a few words on each of these points.

Colonial guide-books, being avowedly written to attract emigrants, are wont to give a somewhat rose-coloured view of the climate. Nevertheless, considering its low latitude, the climate of the southern parts of Australia is remarkably conducive to the health of adults coming from the colder regions of Europe. This, as is well known, is due to the dryness of the air, the absence of miasmatic agents, and the proximity of a vast ocean.

For nine months out of the twelve the weather is most propitious to health. The temperature of the winter season especially is remarkably equable, since mild northerly winds there chiefly prevail, and the coldest weather in Victoria is no more formidable than that of a bright, keen October day in England. But during the summer months a different state of meteorological conditions prevails. The temperature then is chiefly regulated by the direction of the wind. A north wind, blowing from the inland deserts, brings intense heat; a south wind, blowing from an ocean on which within a few hundred miles icebergs are floating, brings a remarkable degree of cold. Two or three days of excessive heat, with a thermometer rising as high as 110° in the shade, will be immediately followed by several days which would be thought chilly even in such a weeping summer as we have just experienced in this country. During the summer months in Victoria southerly winds often blow, accompanied by chilling rains. On such days I have noted 56° as the highest temperature; while at night (generally clear and cloudless after these cold rains) the mercury would sink to 40°. I have known Christmas-day to be as cold as a very mild Christmas-day in England, so that we were glad to sit over the fire; yet two or three days afterwards we had intense heat, with the usual phenomena of bush-fires, and fruits withered as if by a frost. I see from my notes that on the 5th October, 1869, a warm north wind blew, which even at that early season (spring at the antipodes) raised the thermometer to 80°. Ten days afterwards, on the 15th October, we had a snow-storm, which lasted nearly the whole day!

All Australian medical men know how dangerous to infant life are these alternations, which succeed each other with especial suddenness near the coast, where the bulk of the population is settled. In Queensland, I admit, these summer variations are far slighter; but then Queensland is almost tropical in its characteristics (lat. 29° is the southern limit of the colony), and the summer season (as in Natal) is the rainy season, and is consequently a season not altogether suited to persons from the north of Europe, though, owing to the peculiarities of Australia already adverted to, Queensland is incomparably better suited to northern Europeans than most other places in an equally low latitude.

Next, as regards the habits of the Australian colonists. For dwellers in so warm a climate, they eat a great deal of animal food; persons who rarely tasted meat at home growl if they don't get it thrice a day. Meat is liberally given to young children, and even to babies as a lollipop to keep them quiet. The supply of milk, again, though more plentiful than it was twenty years ago, is singularly deficient for a land abounding in flocks and herds. Then a large part of the population lives in tents or in their weather-board houses, so that they feel the extremes of heat and cold far more than they would in more substantial buildings.

All these things, in my humble opinion, conduce to an excessive mortality among young children in Australia.

I remain, Sir, your obedient servant,

Strand, Nov. 4th, 1879. ARTHUR LOCKER, Editor of *Graphic*.

W. T. B., (Wanderer's Club.)—The literature of cholera is so extensive that we must refer our correspondent to the Catalogues of the Library of the Royal College of Surgeons or of the Library of the Royal Medical and Chirurgical Society. With reference to the hygiene of cholera, refer to the Official Memorandum on Precautions against Cholera, published by the Local Government Board. Cholera is not a quarantinable disease in this country, but is dealt with by a process of "medical inspection" (so called) under an order of the Local Government Board. Copies of the Memorandum and Order (with explanatory notes) referred to may be obtained at the Office of that Board, or by note addressed to the Secretary. For the rules as to quarantine of cholera in foreign countries, see Sir J. Baker Sherston's recent work on Quarantine.

Emigrant, (Oct. 22nd.)—Our correspondent's letter will receive attention at an early date, but has been put back from great want of space, consequent upon the commencement of the winter session.

Senex.—It is within the principal's right. Custom varies, as does the nature of principals.